INJURY EXPERIENCE IN COAL MINING, 1955–56

Analysis of Mine Safety Factors, Related Employment, and Production Data

By John C. Machisak, Virginia E. Wrenn, Nina L. Jones, Elizabeth J. Reid, and Dora D. Rice

* * * * * * * * * * * information circular 7976

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INJURY EXPERIENCE IN COAL MINING, 1955–56

ANALYSIS OF MINE SAFETY FACTORS, RELATED EMPLOYMENT, AND PRODUCTION DATA[1]

BY

John C. Machisak,[2] Virginia E. Wrenn,[3] Nina L. Jones,[4] Elizabeth J. Reid,[5] and Dora D. Rice[6]

Introduction and Summary

INJURY DATA and experience at coal mines in the United States for 1955 and 1956 are presented in this publication with a minimum of interpretation and comment because of the numerous tables required to afford detailed comparisons between the 2 years. Corresponding tables for 1955 and 1956 follow in consecutive order under the following general sections:

(A) *General injury experience:*

Tables 1 to 11: Contain current data on number of fatal and nonfatal injuries, frequency and severity rates, and average severity.

(B) *Selected injury data:*

Tables 12 to 77: Contain current data on causes of injuries, distribution of injuries by part of body injured, days of disability, extent of hand and machine loading, experience by employment and production groups, and various other operating factors and physical conditions related to the occurrence of injuries at the Nation's coal mines.

(C) *Injury experience, by States:*

Tables 78 to 87: Contain data on injuries, injury rates, employment, cause of injuries, and severity rates by States.

(D) *Major disasters:*

Table 88: Contains data on major disasters, 1947–56. A major disaster is defined as a single accident in which, or as the result of which, five or more persons are killed instantly or died at any time thereafter.

(E) *Historical coal-mine-fatality experience:*

Tables 89 to 93: Contain data on fatalities and their causes at bituminous-coal and anthracite mines from the earliest records through 1956.

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GENERAL INJURY EXPERIENCE IN 1956

The frequency of all injuries at coal mines in the United States in 1956 was slightly higher than in 1955, when the rate was the lowest since injury statistics were first compiled by the Bureau of Mines in 1930. Frequency rate of injuries is defined as the number of injuries per million man-hours of exposure to the hazards of an industry. The combined frequency rate (fatal and nonfatal) for all coal mines—bituminous (including lignite) and anthracite—was 46.73, compared with the record low of 46.03 for 1955.

The combined rate for the bituminous-coal and lignite industry was 44.02 per million man-hours and for the anthracite industry 67.42, whereas in 1955 the respective rates were 43.72 and 64.77.

DESCRIPTION OF DATA

The data in this publication were compiled from reports furnished by bituminous-coal (including lignite) and anthracite producers on two questionnaires of the Bureau of Mines, Form 6–1420, "Employer's Report of Coal-Mine Injury," and Form 6–1420A, "Coal-Mine Injuries and Employment." Exposure, tonnage, and operating data were reported monthly from mines employing 20 or more men daily and annually from mines employing less than 20 men. Injury and employment data cover all men at an operation who were engaged in production, maintenance, and repair work, including supervisory and technical personnel. Office force, coke workers, and employees in stores or affiliated industries are excluded. The companies report actual man-hours and man-days of work on productive and nonproductive days. Man-hour data are reported on a portal-to-portal basis, which includes working time, travel time, and lunch time. The average number of men working daily is calculated by dividing the number of active or productive days into the reported man-days of work. It is lower than a count of names on the payroll because absenteeism and turnover are taken into consideration.

Injury data were obtained from analysis of descriptive reports, furnished by the producers, of each disabling injury. A disabling injury is one that results in death or permanent impairment or causes loss of time, beyond the day of injury, from a regularly established job at the mines.

Days of disability for temporary injuries were found by counting calendar days, beginning with the day following the date of injury and ending with the day before the injured employee returned to work. Permanent partial, permanent total, and fatal injuries were charged with days of disability according to the standard scale of time charges of the American Standards Association, Z16.1, revised 1954.

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GENERAL INJURY DATA, 1955–56

A total of 20,264 injuries (fatal and nonfatal) occurred at all coal mines in 1956, an increase of 5 percent over the 19,305 injuries reported for 1955. The number of injuries causing loss of life was 448, or 28 more than in 1955. Nonfatal injuries totaled 19,816, or 5 percent above 1955.

Production of coal reached 528,446,799 short tons in 1956, or 8 percent more than the 491,467,627 tons produced in 1955. All coal mines reported 433,661,843 man-hours of work in 1956, an increase of 3 percent over the 419,378,615 hours worked in 1955. Operating companies in the coal-mining industry reported an average of 260,285 persons working daily in and around coal mines in 1956, whereas in 1955 the average daily working force was 260,089.

Bituminous-coal and anthracite mines reported 448 fatalities in 1956; 390 occurred in underground workings, 27 at surface operations run in connection with underground mines, 28 in strip pits, 2 at auger mines, and 1 at washeries. No fatality was reported at dredging operations in 1956. Nonfatal injuries for the industry were distributed as follows: 16,256 underground, 2,086 at surface works operated in connection with underground mines, 1,318 in strip pits, 98 at auger mines, 52 at washeries, and 6 at dredges. Of the 19,816 nonfatal injuries, 14 resulted in permanent total disability and 462 in permanent partial disability; 19,340 were temporary, resulting in the loss of 1 day or more from work. The average severity for all injuries was 181.2 days per injury, for permanent partial disabilities 695.6, and for temporary total injuries 29.9. Each fatality and permanent total injury was charged with 6,000 days (a standard industrial charge).

At all coal mines the loss of time for all injuries per million man-hours of exposure was 8,466.28; at underground mines, 9,082.93; and at strip mines, 4,407.61.

TABLE 1.—*Salient statistics on injuries, injury rates, employment, production, and productivity at coal mines in the United States, 1952–56*

	1952	1953	1954	1955	1956
BITUMINOUS COAL MINES					
Number of injuries:					
Fatal	449	397	334	360	392
Nonfatal	23, 719	20, 112	14, 746	15, 966	16, 486
Total	24, 168	20, 509	15, 080	16, 326	16, 878
Injury rates:					
Frequency per million man-hours:					
Fatal	0. 90	0. 89	0. 99	0. 96	1. 02
Nonfatal	47. 64	45. 26	43. 66	42. 76	42. 99
Frequency per million tons:					
Fatal	. 96	. 87	. 85	. 78	. 79
Nonfatal	50. 53	44. 12	37. 62	34. 52	33. 22
Time loss per million man-hours:					
Fatal	5, 410. 57	5, 361. 02	5, 933. 78	5, 784. 93	6, 133. 91
Nonfatal	2, 997. 56	2, 630. 75	2, 565. 57	2, 397. 71	2, 195. 88
Time loss per million tons:					
Fatal	5, 739. 58	5, 225. 00	5, 112. 87	4, 670. 07	4, 739. 73
Nonfatal	3, 179. 84	2, 612. 73	2, 210. 63	1, 935. 63	1, 696. 78
Average severity (days lost per injury):					
Permanent partial	673. 6	708. 1	678. 7	623. 8	663. 3
Temporary total	36. 9	35. 6	35. 3	33. 2	30. 8
All injuries	173. 2	174. 2	190. 3	187. 1	189. 2
Men working daily	338, 719	295, 425	241, 919	225, 539	227, 778
Man-hours worked	497, 914, 065	444, 318, 839	337, 727, 219	373, 383, 853	383, 442, 217
Production (short tons)	469, 372, 619	455, 885, 461	391, 952, 497	462, 519, 381	496, 230, 562
Productivity:					
Tons per man-hour	0. 94	1. 03	1. 16	1. 24	1. 29
Tons per man-day	7. 45	8. 10	9. 17	9. 78	10. 25

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TABLE 1.– *Salient statistics on injuries, injury rates, employment, production, and productivity at coal mines in the United States, 1952–56* —Continued

	1952	1953	1954	1955	1956
ANTHRACITE MINES					
Number of injuries:					
Fatal	99	64	62	60	56
Nonfatal	6, 355	4, 146	2, 972	2, 919	3, 330
Total	6, 454	4, 210	3, 034	2, 979	3, 386
Injury rates:					
Frequency per million man-hours:					
Fatal	1. 03	0. 92	1. 23	1. 30	1. 12
Nonfatal	66. 35	59. 85	59. 18	63. 46	66. 31
Frequency per million tons:					
Fatal	2. 44	2. 10	2. 14	2. 07	1. 74
Nonfatal	156. 55	135. 85	102. 72	100. 84	103. 36
Time loss per million man-hours:					
Fatal	6, 201. 44	5, 543. 15	7, 406. 97	7, 826. 98	6, 690. 61
Nonfatal	2, 369. 22	2, 064. 29	2, 664. 50	2, 423. 47	2, 817. 82
Time loss per million tons:					
Fatal	14, 632. 52	12, 582. 59	12, 857. 44	12, 435. 99	10, 429. 52
Nonfatal	5, 590. 26	4, 685. 80	4, 625. 19	3, 850. 56	4, 392. 51
Average severity (days lost per injury):					
Permanent partial	680. 9	538. 8	850. 3	999. 2	988. 1
Temporary total	24. 6	25. 4	26. 5	22. 1	25. 6
All injuries	127. 2	125. 2	166. 7	158. 3	141. 0
Men working daily	62, 610	55, 701	41, 786	34, 550	32, 507
Man-hours worked	95, 784, 245	69, 274, 699	50, 222, 996	45, 994, 762	50, 219, 626
Production (short tons)	40, 594, 518	30, 518, 359	28, 932, 659	28, 948, 246	32, 216, 237
Productivity:					
Ton per man-hour	0. 42	0. 44	0. 58	0. 63	0. 64
Tons per man-day	3. 13	3. 25	4. 23	4. 61	4. 67
ALL COAL MINES					
Number of injuries:					
Fatal	548	461	396	420	448
Nonfatal	30, 074	24, 258	17, 718	18, 885	19, 816
Total	30, 622	24, 719	18, 114	19, 305	20, 264
Injury rates:					
Frequency per million man-hours:					
Fatal	0. 92	0. 90	1. 02	1. 00	1. 03
Nonfatal	50. 66	47. 23	45. 67	45. 03	45. 69
Frequency per million tons:					
Fatal	1. 07	. 95	. 94	. 85	. 85
Nonfatal	58. 97	49. 87	42. 10	38. 43	37. 50
Time loss per million man-hours:					
Fatal	5, 538. 17	5, 385. 58	6, 124. 50	6, 008. 89	6, 198. 38
Nonfatal	2, 896. 19	2, 597. 60	2, 578. 38	2, 400. 54	2, 267. 90
Time loss per million tons:					
Fatal	6, 447. 47	5, 686. 63	5, 645. 25	5, 127. 50	5, 086. 60
Nonfatal	3, 371. 71	2, 742. 80	2, 376. 62	2, 048. 43	1, 861. 12
Average severity (days lost per injury):					
Permanent partial	674. 2	693. 9	702. 8	660. 3	695. 6
Temporary total	34. 2	33. 8	33. 8	31. 5	29. 9
All injuries	163. 5	165. 9	186. 4	182. 7	181. 2
Men working daily	401, 329	351, 126	283, 705	260, 089	260, 285
Man-hours worked	593, 698, 310	513, 593, 538	387, 950, 215	419, 378, 615	433, 661, 843
Production (short tons)	509, 967, 137	486, 403, 820	420, 885, 156	491, 467, 627	528, 446, 799
Productivity:					
Tons per man-hour	0. 86	0. 95	1. 08	1. 17	1. 22
Tons per man-day	6. 71	7. 40	8. 49	9. 17	9. 56

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TABLE 2.—*Employment, production, and productivity (short tons per man-hour) data on coal mines in the United States, by kind of coal and type of mining, 1955*

	Men working [1]	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
Bituminous-coal mines:							
Underground mines:							
Underground	160, 360	208	33, 408, 510	267, 060, 347	343, 771, 769	1. 29	6, 845
Surface	38, 903	213	8, 279, 948	61, 747, 193			
Total	199, 263	209	41, 688, 458	328, 807, 540	343, 771, 769	1. 05	6, 845
Strip mines	25, 150	216	5, 437, 389	43, 074, 229	115, 055, 189	2. 67	1, 711
Auger mines	1, 126	160	180, 347	1, 502, 084	3, 692, 423	2. 46	120
Total	225, 539	210	47, 306, 194	373, 383, 853	462, 519, 381	1. 24	8, 676
Pennsylvania anthracite mines:							
Underground mines:							
Underground	20, 530	179	3, 667, 678	26, 952, 904	15, 840, 768	. 59	1, 336
Surface [2]	8, 896	186	1, 655, 164	12, 202, 202			
Total	29, 426	181	5, 322, 842	39, 155, 106	15, 840, 768	. 40	1, 336
Strip mines	4, 527	193	874, 179	6, 188, 271	9, 307, 637	1. 50	137
Washeries	491	126	61, 986	437, 277	3, 193, 830	7. 30	25
Dredges	106	245	25, 925	214, 108	606, 011	2. 83	8
Total	34, 550	182	6, 284, 932	45, 994, 762	28, 948, 246	. 63	1, 506
All coal mines:							
Underground mines:							
Underground	180, 890	205	37, 076, 188	294, 013, 251	359, 612, 537	1. 22	8, 181
Surface	47, 799	208	9, 935, 112	73, 949, 395			
Total	228, 689	206	47, 011, 300	367, 962, 646	359, 612, 537	. 98	8, 181
Strip mines	29, 677	213	6, 311, 568	49, 262, 500	124, 362, 826	2. 52	1, 848
Auger mines	1, 126	160	180, 347	1, 502, 084	3, 692, 423	2. 46	120
Washeries	491	126	61, 986	437, 277	3, 193, 830	7. 30	25
Dredges	106	245	25, 925	214, 108	606, 011	2. 83	8
Total	260, 089	206	53, 591, 126	419, 378, 615	491, 467, 627	1. 17	10, 182

[1] Average number of men at work each day mine was active. Because absenteeism and labor turnover are taken into consideration, this number is lower than number available for work as measured by a count of names on payroll.

[2] Includes all man-hours worked in breakers. As a large part of strip and culm-bank anthracite is prepared in breakers, the productivity for anthracite underground mines is slightly low and for anthracite strip and culm-bank operations is slightly high. Effects of this condition on the productivity data for total coal are negligible.

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TABLE 3.—*Employment, production, and productivity (short tons per man-hour) data on coal mines in the United States, by kind of coal and type of mining, 1956*

	Men working [1]	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
Bituminous-coal mines:							
Underground mines:							
Underground	161, 359	210	33, 933, 492	271, 412, 129	361, 840, 104	1. 33	7, 293
Surface	38, 665	213	8, 229, 106	62, 543, 534			
Total	200, 024	211	42, 162, 598	333, 955, 663	361, 840, 104	1. 08	7, 293
Strip mines	25, 929	228	5, 903, 102	46, 800, 890	126, 567, 183	2. 70	1, 740
Auger mines	1, 825	179	326, 450	2, 685, 664	7, 823, 275	2. 91	213
Total	227, 778	212	48, 392, 150	383, 442, 217	496, 230, 562	1. 29	9, 246
Pennsylvania anthracite mines:							
Underground mines:							
Underground	17, 902	212	3, 790, 762	27, 673, 009	16, 908, 361	. 61	1, 254
Surface [2]	8, 594	215	1, 849, 972	13, 587, 081			
Total	26, 496	213	5, 640, 734	41, 260, 090	16, 908, 361	. 41	1, 254
Strip mines	4, 840	216	1, 047, 029	7, 420, 579	10, 868, 591	1. 46	157
Washeries	1, 006	174	174, 919	1, 253, 678	3, 776, 493	3. 01	74
Dredges	165	186	30, 738	285, 279	662, 792	2. 32	23
Total	32, 507	212	6, 893, 420	50, 219, 626	32, 216, 237	. 64	1, 508
All coal mines:							
Underground mines:							
Underground	179, 261	210	37, 724, 254	299, 085, 138	378, 748, 465	1. 27	8, 547
Surface	47, 259	213	10, 079, 078	76, 130, 615			
Total	226, 520	211	47, 803, 332	375, 215, 753	378, 748, 465	1. 01	8, 547
Strip mines	30, 769	226	6, 950, 131	54, 221, 469	137, 435, 774	2. 53	1, 897
Auger mines	1, 825	179	326, 450	2, 685, 664	7, 823, 275	2. 91	213
Washeries	1, 006	174	174, 919	1, 253, 678	3, 776, 493	3. 01	74
Dredges	165	186	30, 738	285, 279	662, 792	2. 32	23
Total	260, 285	212	55, 285, 570	433, 661, 843	528, 446, 799	1. 22	10, 754

[1] Average number of men at work each day mine was active. Because absenteeism and labor turnover are taken into consideration, this number is lower than the number available for work as measured by a count of names on payroll.

[2] Includes all man-hours worked in breakers. As a large part of strip and culm-bank anthracite is prepared in breakers, the productivity for anthracite underground mines is slightly low and for anthracite strip and culm-bank operations is slightly high. Effects of this condition on the productivity data for total coal are negligible.

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TABLE 4.—*Injury experience at bituminous-coal mines in the United States, by place of work, 1955*

	Underground mines			Strip mines	Auger mines	Total
	Underground	Surface	Total			
Number of injuries:						
Fatal	303	32	335	22	3	360
Nonfatal:						
Permanent total	15	1	16	1	----	17
Permanent partial	347	72	419	24	3	446
Temporary total	12, 925	1, 606	14, 531	943	29	15, 503
Total nonfatal	13, 287	1, 679	14, 966	968	32	15, 966
Grand total	13, 590	1, 711	15, 301	990	35	16, 326
Days lost:						
Fatal	1, 818, 000	192, 000	2, 010, 000	132, 000	18, 000	2, 160, 000
Nonfatal:						
Permanent total	90, 000	6, 000	96, 000	6, 000	----	102, 000
Permanent partial	203, 606	59, 575	263, 181	14, 650	375	278, 206
Temporary total	446, 215	44, 599	490, 814	23, 859	389	515, 062
Total nonfatal	739, 821	110, 174	849, 995	44, 509	764	895, 268
Grand total	2, 557, 821	302, 174	2, 859, 995	176, 509	18, 764	3, 055, 268
Frequency rates: [1]						
Per million man-hours:						
Fatal	1. 13	0. 52	1. 02	0. 51	2. 00	0. 96
Nonfatal	49. 75	27. 19	45. 52	22. 47	21. 30	42. 76
All injuries	50. 89	27. 71	46. 53	22. 98	23. 30	43. 72
Per million tons:						
Fatal	. 88	----	. 97	. 19	. 81	. 78
Nonfatal	38. 65	----	43. 53	8. 41	8. 67	34. 52
All injuries	39. 53	----	44. 51	8. 60	9. 48	35. 30
Time-loss rates:						
Per million man-hours:						
Fatal	6, 807. 45	3, 109. 45	6, 113. 00	3, 064. 48	11, 983. 35	5, 784. 93
Nonfatal	2, 770. 24	1, 784. 28	2, 585. 08	1, 033. 31	508. 63	2, 397. 71
All injuries	9, 577. 69	4, 893. 73	8, 698. 08	4, 097. 79	12, 491. 98	8, 182. 65
Per million tons:						
Fatal	5, 288. 39	----	5, 846. 90	1, 147. 28	4, 874. 85	4, 670. 07
Nonfatal	2, 152. 07	----	2, 472. 56	386. 85	206. 91	1, 935. 63
All injuries	7, 440. 46	----	8, 319. 46	1, 534. 12	5, 081. 76	6, 605. 71
Average severity: [2]						
Permanent partial	586. 8	827. 4	628. 1	610. 4	125. 0	623. 8
Temporary total	34. 5	27. 8	33. 8	25. 3	13. 4	33. 2
All injuries [3]	188. 2	176. 6	186. 9	178. 3	536. 1	187. 1

[1] All injury data are calculated separately, and total rates may differ slightly from the sums of the component rates. For man-hour and production data, see table 2.

[2] Average number of days lost per injury.

[3] Includes data for fatalities and permanent total disabilities, which have a standard time-loss charge of 6,000 days each.

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TABLE 5.—*Injury experience at bituminous-coal mines in the United States, by place of work, 1956*

	Underground mines			Strip mines	Auger mines	Total
	Underground	Surface	Total			
Number of injuries:						
Fatal	342	23	365	25	2	392
Nonfatal:						
Permanent total	10	1	11	1	----	12
Permanent partial	340	46	386	28	2	416
Temporary total	13, 295	1, 613	14, 908	1, 054	96	16, 058
Total nonfatal	13, 645	1, 660	15, 305	1, 083	98	16, 486
Grand total	13, 987	1, 683	15, 670	1, 108	100	16, 878
Days lost:						
Fatal	2, 052, 000	138, 000	2, 190, 000	150, 000	12, 000	2, 352, 000
Nonfatal:						
Permanent total	60, 000	6, 000	66, 000	6, 000	----	72, 000
Permanent partial	224, 934	22, 611	247, 545	28, 015	375	275, 935
Temporary total	423, 462	41, 013	464, 475	28, 197	1, 386	494, 058
Total nonfatal	708, 396	69, 624	778, 020	62, 212	1, 761	841, 993
Grand total	2, 760, 396	207, 624	2, 968, 020	212, 212	13, 761	3. 193, 993
Frequency rates: [1]						
Per million man-hours:						
Fatal	1. 26	0. 37	1. 09	0. 53	0. 74	1. 02
Nonfatal	50. 27	26. 54	45. 83	23. 14	36. 49	42. 99
All injuries	51. 53	26. 91	46. 92	23. 67	37. 23	44. 02
Per million tons:						
Fatal	. 95	----	1. 01	. 20	. 26	. 79
Nonfatal	37. 71	----	42. 30	8. 56	12. 53	33. 22
All injuries	38. 66	----	43. 31	8. 75	12. 78	34. 01
Time-loss rates:						
Per million man-hours:						
Fatal	7, 560. 46	2, 206. 46	6, 557. 76	3, 205. 07	4, 468. 17	6, 133. 91
Nonfatal	2, 610. 04	1, 113. 21	2, 329. 71	1, 329. 29	655. 70	2, 195. 88
All injuries	10, 170. 50	3, 319. 67	8, 887. 47	4, 534. 36	5, 123. 87	8, 329. 79
Per million tons:						
Fatal	5, 671. 01	----	6, 052. 40	1, 185. 14	1, 533. 88	4, 739. 73
Nonfatal	1, 957. 76	----	2, 150. 18	491. 53	225. 10	1, 696. 78
All injuries	7, 628. 77	----	8, 202. 57	1, 676. 67	1, 758. 98	6, 436. 51
Average severity: [2]						
Permanent partial	661. 6	491. 5	641. 3	1, 000. 5	187. 5	663. 3
Temporary total	31. 9	25. 4	31. 2	26. 8	14. 4	30. 8
All injuries [3]	197. 4	123. 4	189. 4	191. 5	137. 6	189. 2

[1] All injury data are calculated separately, and total rates may differ slightly from the sums of the component rates. For man-hour and production data see table 3.

[2] Average number of days lost per injury.

[3] Includes data for fatalities and permanent total disabilities, which have a standard time-loss charge of 6,000 days each.

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TABLE 6.—*Injury experience at Pennsylvania anthracite mines, by place of work, 1955*

	Underground mines			Strip mines	Washeries	Dredges	Total
	Underground	Surface	Total				
Number of injuries:							
Fatal	49	7	56	3	1	----	60
Nonfatal:							
Permanent total	----	----	----	----	----	----	----
Permanent partial	33	7	40	8	----	----	48
Temporary total	2, 298	395	2, 693	164	13	1	2, 871
Total nonfatal	2, 331	402	2, 733	172	13	1	2, 919
Grand total	2, 380	409	2, 789	175	14	1	2, 979
Days lost:							
Fatal	294, 000	42, 000	336, 000	18, 000	6, 000	----	360, 000
Nonfatal:							
Permanent total	----	----	----	----	----	----	----
Permanent partial	26, 888	6, 525	33, 413	14, 550	----	----	47, 963
Temporary total	51, 262	8, 038	59, 300	4, 014	180	10	63, 504
Total nonfatal	78, 150	14, 563	92, 713	18, 564	180	10	111, 467
Grand total	372, 150	56, 563	428, 713	36, 564	6, 180	10	471, 467
Frequency rates: [1]							
Per million man-hours:							
Fatal	1. 82	0. 57	1. 43	0. 48	2. 29	----	1. 30
Nonfatal	86. 48	32. 94	69. 80	27. 79	29. 73	4. 67	63. 46
All injuries	88. 30	33. 52	71. 23	28. 28	32. 02	4. 67	64. 77
Per million tons:							
Fatal	3. 09	----	3. 54	. 32	. 31	----	2. 07
Nonfatal	147. 15	----	172. 53	18. 48	4. 07	1. 65	100. 84
All injuries	150. 25	----	176. 06	18. 80	4. 38	1. 65	102. 91
Time-loss rates:							
Per million man-hours:							
Fatal	10, 907. 92	3, 442. 00	8, 581. 26	2, 908. 73	13, 721. 28	----	7, 826. 98
Nonfatal	2, 899. 50	1, 193. 47	2, 367. 84	2, 999. 87	411. 64	46. 71	2, 423. 47
All injuries	13, 807. 42	4, 635. 47	10, 949. 10	5, 908. 60	14, 132. 92	46. 71	10, 250. 45
Per million tons:							
Fatal	18, 559. 71	----	21, 211. 09	1, 933. 90	1, 878. 62	----	12, 435. 99
Nonfatal	4, 933. 47	----	5, 852. 81	1, 994. 49	56. 36	16. 50	3, 850. 56
All injuries	23, 493. 18	----	27, 063. 90	3, 928. 39	1, 934. 98	16. 50	16, 286. 55
Average severity: [2]							
Permanent partial	814. 8	932. 1	835. 3	1, 818. 8	----	----	999. 2
Temporary total	22. 3	20. 3	22. 0	24. 5	13. 8	10. 0	22. 1
All injuries [3]	156. 4	138. 3	153. 7	208. 9	441. 4	10. 0	158. 3

[1] All injury rates are calculated separately, and total rates may differ slightly from the sums of the component rates. For man-hour and production data, see table 2.

[2] Average number of days per injury.

[3] Includes data for fatalities and permanent total disabilities, which have a standard time-loss charge of 6,000 days each.

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TABLE 7.—*Injury experience at Pennsylvania anthracite mines, by place of work, 1956*

	Underground mines			Strip mines	Washeries	Dredges	Total
	Underground	Surface	Total				
Number of injuries:							
Fatal	48	4	52	3	1	----	56
Nonfatal:							
Permanent total	2	----	2	----	----	----	2
Permanent partial	37	4	41	4	1	----	46
Temporary total	2, 572	422	2, 994	231	51	6	3, 282
Total nonfatal	2, 611	426	3, 037	235	52	6	3, 330
Grand total	2, 659	430	3, 089	238	53	6	3, 386
Days lost:							
Fatal	288, 000	24, 000	312, 000	18, 000	6, 000	----	336, 000
Nonfatal:							
Permanent total	12, 000	----	12, 000	----	----	----	12, 000
Permanent partial	38, 851	900	39, 751	2, 100	3, 600	----	45, 451
Temporary total	65, 173	11, 114	76, 287	6, 675	1, 045	52	84, 059
Total nonfatal	116, 024	12, 014	128, 038	8, 775	4, 645	52	141, 510
Grand total	404, 024	36, 014	440, 038	26, 775	10, 645	52	477, 510
Frequency rates: [1]							
Per million man-hours:							
Fatal	1. 73	0. 29	1. 26	0. 40	0. 80	----	1. 12
Nonfatal	94. 35	31. 35	73. 61	31. 67	41. 48	21. 03	66. 31
All injuries	96. 09	31. 65	74. 87	32. 07	42. 28	21. 03	67. 42
Per million tons:							
Fatal	2. 84	----	3. 08	. 28	. 26	----	1. 74
Nonfatal	154. 42	----	179. 62	21. 62	13. 77	9. 05	103. 36
All injuries	157. 26	----	182. 69	21. 90	14. 03	9. 05	105. 10
Time-loss rates:							
Per million man-hours:							
Fatal	10, 407. 25	1, 766. 38	7, 561. 79	2, 425. 69	4, 785. 92	----	6, 690. 61
Nonfatal	4, 192. 68	884. 22	3, 103. 19	1, 182. 52	3, 705. 10	182. 28	2, 817. 82
All injuries	14, 599. 93	2, 650. 61	10, 664. 98	3, 608. 21	8, 491. 02	182. 28	9, 508. 43
Per million tons:							
Fatal	17, 032. 99	----	18, 452. 41	1, 656. 15	1, 588. 78	----	10, 429. 52
Nonfatal	6, 861. 93	----	7, 572. 47	807. 37	1, 229. 98	78. 46	4, 392. 51
All injuries	23, 894. 92	----	26, 024. 88	2, 463. 52	2, 818. 75	78. 46	14, 822. 03
Average severity: [2]							
Permanent partial	1, 050. 0	225. 0	969. 5	525. 0	3. 600. 0	----	988. 1
Temporary total	25. 3	26. 3	25. 5	28. 9	20. 5	8. 7	25. 6
All injuries [3]	151. 9	83. 8	142. 5	112. 5	200. 8	8. 7	141. 0

[1] All injury rates are calculated separately, and total rates may differ slightly from the sums of the component rates. For man-hour and production data, see table 3.

[2] Average number of days lost per injury.

[3] Includes data for fatalities and permanent total disabilities, which have a standard time-loss charge of 6,000 days each.

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TABLE 8.—*Injury experience at all coal mines in the United States, by place of work, 1955*

	Underground mines			Strip mines	Auger mines	Washeries	Dredges	Total
	Underground	Surface	Total					
Number of injuries:								
Fatal	352	39	391	25	3	1	----	420
Nonfatal:								
Permanent total	15	1	16	1	----	----	----	17
Permanent partial	380	79	459	32	3	----	----	494
Temporary total	15, 223	2, 001	17, 224	1, 107	29	13	1	18, 374
Total nonfatal	15, 618	2, 081	17, 699	1, 140	32	13	1	18, 885
Grand total	15, 970	2, 120	18, 090	1, 165	35	14	1	19, 305
Days lost:								
Fatal	2, 112, 000	234, 000	2, 346, 000	150, 000	18, 000	6, 000	----	2, 520, 000
Nonfatal:								
Permanent total	90, 000	6, 000	96, 000	6, 000	----	----	----	102, 000
Permanent partial	230, 494	66, 100	296, 594	29, 200	375	----	----	326, 169
Temporary total	497, 477	52, 637	550, 114	27, 873	389	180	10	578, 566
Total nonfatal	817, 971	124, 737	942, 708	63, 073	764	180	10	1, 006, 735
Grand total	2, 929, 971	358, 737	3, 288, 708	213, 073	18, 764	6, 180	10	3, 526, 735
Frequency rates:[1]								
Per million man-hours:								
Fatal	1. 20	0. 53	1. 06	0. 51	2. 00	2. 29	----	1. 00
Nonfatal	53. 12	28. 14	48. 10	23. 14	21. 30	29. 73	4. 67	45. 03
All injuries	54. 32	28. 67	49. 16	23. 65	23. 30	32. 02	4. 67	46. 03
Per million tons:								
Fatal	. 98	----	1. 09	. 20	. 81	. 31	----	. 85
Nonfatal	43. 43	----	49. 22	9. 17	8. 67	4. 07	1. 65	38. 43
All injuries	44. 41	----	50. 30	9. 37	9. 48	4. 38	1. 65	39. 28
Time-loss rates:								
Per million man-hours:								
Fatal	7, 183. 35	3, 164. 33	6, 375. 65	3, 044. 91	11, 983. 35	13, 721. 28	----	6, 008. 89
Nonfatal	2, 782. 09	1, 686. 79	2, 561. 97	1, 280. 35	508. 63	411. 64	46. 71	2, 400. 54
All injuries	9, 965. 44	4, 851. 11	8, 937. 61	4, 325. 26	12, 491. 98	14, 132. 92	46. 71	8, 409. 43
Per million tons:								
Fatal	5, 872. 99	----	6, 523. 69	1, 206. 15	4, 874. 85	1, 878. 62	----	5, 127. 50
Nonfatal	2, 274. 59	----	2, 621. 45	507. 17	206. 91	56. 36	16. 50	2, 048. 43
All injuries	8, 147. 58	----	9, 145. 14	1, 713. 32	5, 081. 76	1, 934. 98	16. 50	7, 175. 93
Average severity:[2]								
Permanent partial	606. 6	836. 7	646. 2	912. 5	125. 0	----	----	660. 3
Temporary total	32. 7	26. 3	31. 9	25. 2	13. 4	13. 8	10. 0	31. 5
All injuries[3]	183. 5	169. 2	181. 8	182. 9	536. 1	441. 4	10. 0	182. 7

[1] All injury rates are calculated separately, and total rates may differ slightly from the sums of the component rates. For man-hour and production data, see table 2.

[2] Average number of days lost per injury.

[3] Includes data for fatalities and permanent total disabilities, which have a standard time-loss charge of 6,000 days each.

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TABLE 9.—*Injury experience at all coal mines in the United States, by place of work, 1956*

	Underground mines			Strip mines	Auger mines	Washeries	Dredges	Total
	Underground	Surface	Total					
Number of injuries:								
Fatal	390	27	417	28	2	1		448
Nonfatal:								
Permanent total	12	1	13	1				14
Permanent partial	377	50	427	32	2	1		462
Temporary total	15,867	2,035	17,902	1,285	96	51	6	19,340
Total nonfatal	16,256	2,086	18,342	1,318	98	52	6	19,816
Grand total	16,646	2,113	18,759	1,346	100	53	6	20,264
Days lost:								
Fatal	2,340,000	162,000	2,502,000	168,000	12,000	6,000		2,688,000
Nonfatal:								
Permanent total	72,000	6,000	78,000	6,000				84,000
Permanent partial	263,785	23,511	287,296	30,115	375	3,600		321,386
Temporary total	488,635	52,127	540,762	34,872	1,386	1,045	52	578,117
Total nonfatal	824,420	81,638	906,058	70,987	1,761	4,645	52	983,503
Grand total	3,164,420	243,638	3,408,058	238,987	13,761	10,645	52	3,671,503
Frequency rates:[1]								
Per million man-hours:								
Fatal	1.30	0.35	1.11	0.52	0.74	0.80		1.03
Nonfatal	54.35	27.40	48.88	24.31	36.49	41.48	21.03	45.69
All injuries	55.66	27.75	50.00	24.82	37.23	42.28	21.03	46.73
Per million tons:								
Fatal	1.03		1.10	.20	.26	.26		.85
Nonfatal	42.92		48.43	9.59	12.53	13.77	9.05	37.50
All injuries	43.95		49.53	9.79	12.78	14.03	9.05	38.35
Time-loss rates:								
Per million man-hours:								
Fatal	7,823.86	2,127.92	6,668.16	3,098.40	4,468.17	4,785.92		6,198.38
Nonfatal	2,756.47	1,072.34	2,414.77	1,309.20	655.70	3,705.10	182.28	2,267.90
All injuries	10,580.33	3,200.26	9,082.93	4,407.61	5,123.87	8,491.02	182.28	8,466.28
Per million tons:								
Fatal	6,178.24		6,605.97	1,222.39	1,533.88	1,588.78		5,086.60
Nonfatal	2,176.70		2,392.24	516.51	225.10	1,229.98	78.46	1,861.12
All injuries	8,354.94		8,998.21	1,738.90	1,758.98	2,818.75	78.46	6,947.72
Average severity:[2]								
Permanent partial	699.7	470.2	672.8	941.1	187.5	3,600.0		695.6
Temporary total	30.8	25.6	30.2	27.1	14.4	20.5	8.7	29.9
All injuries [3]	190.1	115.3	181.7	177.6	137.6	200.8	8.7	181.2

[1] All injury rates are calculated separately, and total rates may differ slightly from the sums of the component rates. For man-hours and production data, see table 3.

[2] Average number of days lost per injury.

[3] Includes data for fatalities and permanent total disabilities, which have a standard time-loss charge of 6,000 days each.

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TABLE 10.—*Number of injuries and frequency and time-loss rates [1] at coal mines in the United States, by degree of injury, 1955*

Degree of injury	Bituminous-coal mines			Pennsylvania anthracite mines			All coal mines		
	Number of injuries	Injury rates		Number of injuries	Injury rates		Number of injuries	Injury rates	
		Frequency	Time loss		Frequency	Time loss		Frequency	Time loss
Fatal	360	0. 96	5, 784. 93	60	1. 30	7, 826. 98	420	1. 00	6, 008. 89
Permanent total	17	. 05	273. 18				17	. 04	243. 22
Permanent partial	446	1. 19	745. 09	48	1. 04	1, 042. 79	494	1. 18	777. 74
Temporary total	15, 503	41. 52	1, 379. 44	2, 871	62. 42	1, 380. 68	18, 374	43. 81	1, 379. 58
Total nonfatal injuries	15, 966	42. 76	2, 397. 71	2, 919	63. 46	2, 423. 47	18, 885	45. 03	2, 400. 54
All injuries	16, 326	43. 72	8, 182. 65	2, 979	64. 77	10, 250. 45	19, 305	46. 03	8, 409. 43

[1] Frequency rate is the number of injuries per million man-hours; time-loss rate is the number of days of disability per million man-hours.

TABLE 11.—*Number of injuries and frequency and time-loss rates [1] at coal mines in the United States, by degree of injury, 1956*

Degree of injury	Bituminous-coal mines			Pennsylvania anthracite mines			All coal mines		
	Number of injuries	Injury rates		Number of injuries	Injury rates		Number of injuries	Injury rates	
		Frequency	Time loss		Frequency	Time loss		Frequency	Time loss
Fatal	392	1. 02	6, 133. 91	56	1. 12	6, 690. 61	448	1. 03	6, 198. 38
Permanent total	12	. 03	187. 77	2	. 04	238. 95	14	. 03	193. 70
Permanent partial	416	1. 08	719. 63	46	. 92	905. 04	462	1. 07	741. 10
Temporary total	16, 058	41. 88	1, 288. 48	3, 282	65. 35	1, 673. 83	19, 340	44. 60	1, 333. 11
Total nonfatal injuries	16, 486	42. 99	2, 195. 88	3, 330	66. 31	2, 817. 82	19, 816	45. 69	2, 267. 90
All injuries	16, 878	44. 02	8, 329. 79	3, 386	67. 42	9, 508. 43	20, 264	46. 73	8, 466. 28

[1] Frequency rate is the number of injuries per million man-hours; time-loss rate is the number of days of disability per million man-hours.

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The largest number of fatalities in 1956 was caused by falls of roof, face, or rib; 239, or 61 percent, of the underground fatalities resulted from this agency. Injuries from haulage accidents totaled 77 deaths, or 20 percent, and ranked second as a cause of underground fatalities.

At surface works operated in connection with underground mines haulage accidents caused 14, or 52 percent, of all surface fatalities.

Stripping operations reported 10, or 36 percent, of their 28 fatalities as due to haulage accidents. Falls of coal or overburden and explosives claimed 4 lives each, or 14 percent each, of the stripping fatalities. Auger mines reported 2 fatalities from suffocation in 1956.

Of the 16,256 nonfatal injuries in underground workings in 1956, 3,520 resulted from handling material, 3,206 from haulage accidents, 3,189 from falls of roof, face, or rib, and 2,429 from machinery. These four major causes accounted for 76 percent of all underground nonfatal injuries.

At surface works operated in connection with underground mines, haulage accidents caused 587 disabling injuries, handling materials 568, and falls of persons 332. These three agencies accounted for 1,487 nonfatal injuries, or 71 percent of all surface injuries.

At stripping operations, 308 nonfatal injuries resulted from handling materials, 289 from machinery, and 233 from falls of persons. The total number of injuries from these three causes accounted for 63 percent of all stripping injuries.

Auger mines reported 98 nonfatal injuries from all agencies, washeries 52, and dredges 6 in 1956. (See fig. 1.)

At bituminous-coal mines in 1956, multiple injuries caused 173, or 44 percent, of the fatalities reported; trunk (including hernia) 107, or 27 percent; head (including eye) 89, or 23 percent; limbs (leg 4 and arm 1) 5, or 1 percent; and part of body not stated, 18, or 5 percent.

A total of 16,486 nonfatal injuries was reported at bituminous-coal and lignite mines. These injuries were distributed as follows: Trunk (excluding hernia), 4,251 (26 percent); hand and finger, 3,167 (19 percent); leg (including knee and ankle), 2,582 (16 percent); foot and toe, 1,889 (11 percent); eye, 1,148 (7 percent); multiple injuries, 1,073 (7 percent); arm (including shoulder, elbow, and wrist), 840 (5 percent); head (including neck), 833 (5 percent); hernia, 206 (1 percent); and part of body not stated, 497 (3 percent).

At Pennsylvania anthracite mines, the 56 fatalities reported by the industry revealed that the parts of the body most frequently injured were the same as in the bituminous industry. Multiple injuries caused 23, or 41 percent; trunk (excluding hernia) 16, or 29 percent; head 15, or 27 percent; leg (including ankle) 1, or 2 percent; and not stated 1, or 2 percent.

Nonfatal injuries reported by the Pennsylvania anthracite industry totaled 3,330 in 1956. Accidents resulted in 667 injuries to the trunk (excluding hernia), or 20 percent of the total; hand and finger 606, or 18 percent; leg (including knee and ankle) 525, or 16 percent; foot and toe 378, or 11 percent; eye 323, or 10 percent; multiple injuries 295, or 9 percent; head (including neck) 236, or 7 percent; arm (including shoulder, elbow, and wrist) 184, or 6 percent; hernia 37, or 1 percent; and not stated 79, or 2 percent. (See fig. 2.)

A total of 187 fatalities and 9,102 nonfatal injuries occurred at underground bituminous-coal mines where all coal was loaded mechanically. The frequency rate of fatalities per million man-hours of work was 0.94 and the frequency rate of nonfatal injuries 45.52. At mines where all coal was loaded by hand there were 45 fatalities and 1,156 nonfatal injuries, resulting in frequency rates of 1.44 and 37.02, respectively.

At underground anthracite mines 4 fatalities and 128 nonfatal injuries were reported from mines where all coal was loaded mechanically. These injuries occurred at frequency rates of 3.14 and 100.58, respectively. At mines where all coal was hand loaded, 6 fatalities and 164 nonfatal injuries resulted in frequency rates of 1.50 and 41.04.

The preceding figures indicate that the injury experience at bituminous and anthracite mines where all coal was hand loaded was virtually the same but that, where all coal was loaded mechanically, the experience in anthracite mines, both for fatal and nonfatal injuries, was not as good as that in bituminous-coal mines.

In 35 percent (2,547) of the underground bituminous-coal mines all coal was hand loaded;

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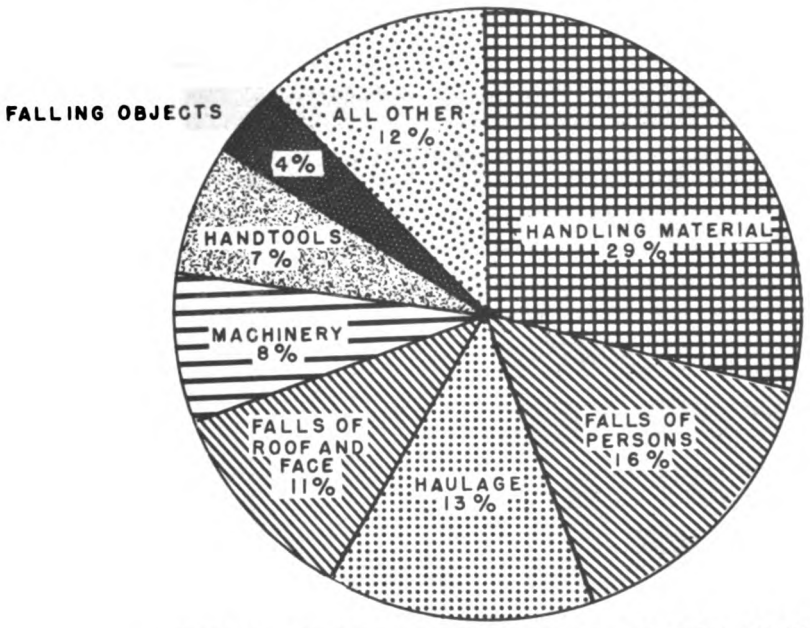
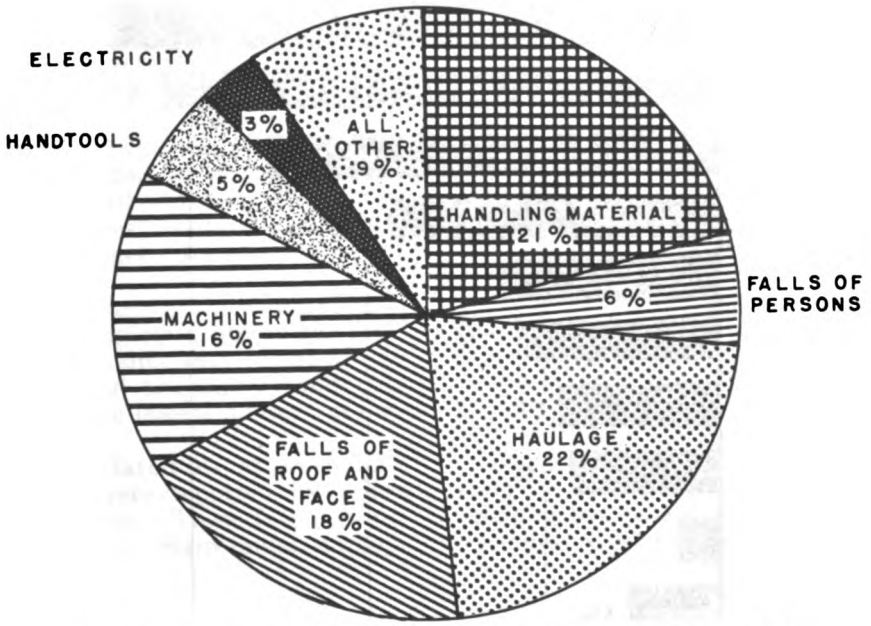


AT PENNSYLVANIA ANTHRACITE MINES, 1956



AT BITUMINOUS-COAL AND LIGNITE MINES, 1956

FIGURE 1.—Distribution of Fatal and Nonfatal Injuries by Major Causes.

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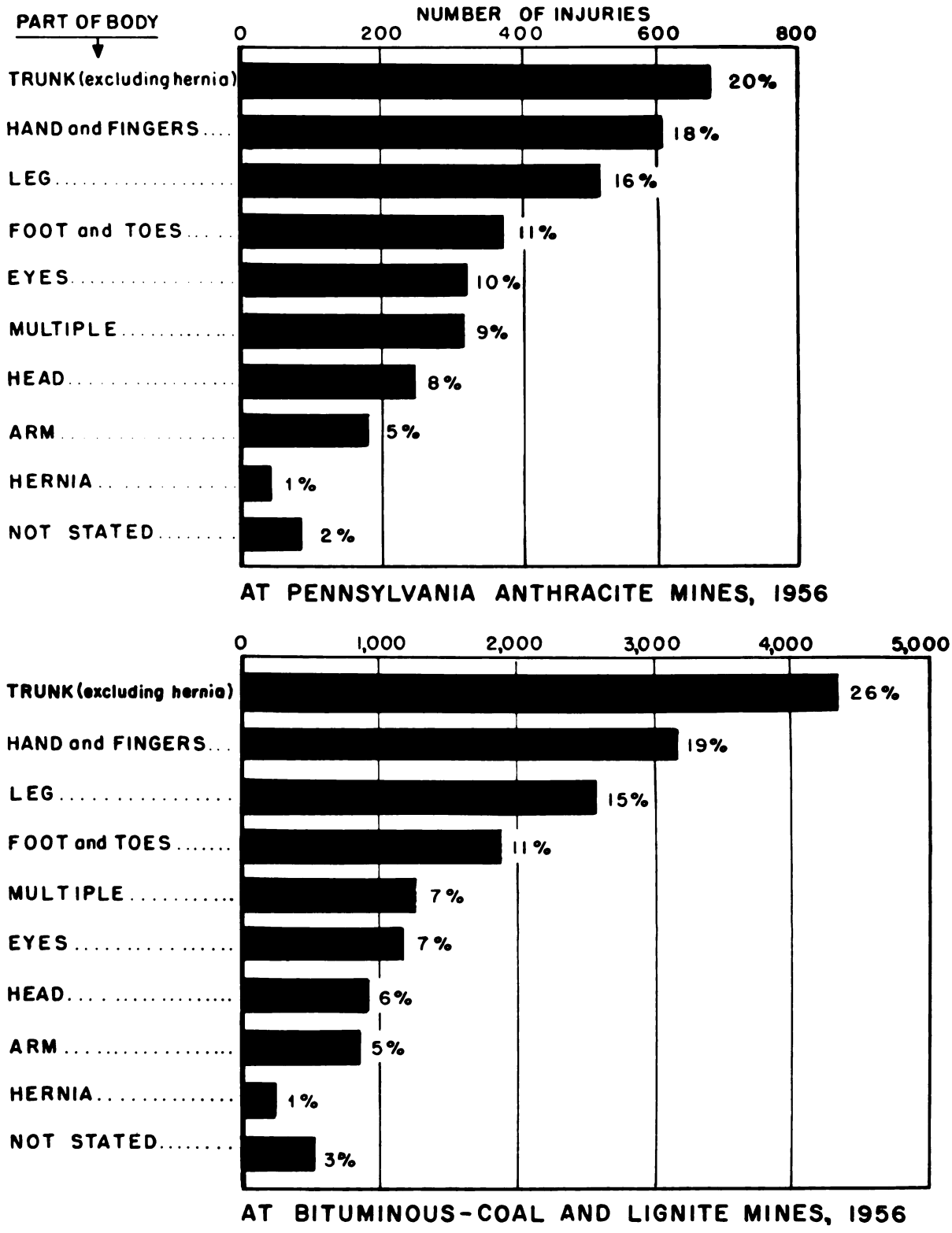

FIGURE 2.—Distribution of Fatal and Nonfatal Injuries by Part of Body Affected.

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man-hours worked and coal produced in these mines accounted for 9 and 6 percent, respectively, of the total underground exposure and production. In 14 percent (1,005 mines) all coal was mechanically loaded; exposure and production at these mines represented 60 and 68 percent, respectively, of the total at underground mines. In the anthracite industry all coal was hand loaded at 447 underground mines (36 percent of the total). Exposure and production in these mines accounted for 10 and 13 percent, respectively, of the total underground. The 52 mines where all coal was mechanically loaded represented 4 percent of the total underground mines and accounted for only 3 and 4 percent, respectively, of the total underground man-hours and production.

In the bituminous-coal industry 3,237 underground mines employing less than 5 men reported 26 fatalities and 237 lost-time injuries. These injuries occurred at frequency rates of 2.46 and 22.42 per million man-hours of exposure. The fatality rate in this group of mines was higher than in any other group and the nonfatal-injury rate, lower. Mines employing 400 to 499 men recorded a fatality rate of 0.54, the lowest fatality rate of any employment group of underground bituminous-coal mines. The highest nonfatal-injury rate (70.64) was recorded by mines employing 150 to 174 men.

At bituminous stripping operations 1,740 mines reported 25 fatalities and 1,083 nonfatal injuries at respective frequency rates of 0.53 and 23.14 per million man-hours of exposure. The 31 mines employing 75 to 99 men had the lowest fatality rate (0.18), whereas 4 mines employing 200 or more men achieved the best nonfatal-injury rate (15.29).

The 2 fatalities recorded for auger operations were reported by the 101 mines employing less than 5 men. The lowest nonfatal-injury rate was recorded for 11 auger mines employing 15 to 19 men.

Five underground mines in the Pennsylvania anthracite industry, employing 300 to 399 men, recorded the lowest fatality rate (0.34) of any employment group, and 139 mines employing 5 to 9 men attained the lowest nonfatal-injury rate (36.80).

Two of the three fatalities at anthracite stripping operations were reported by mines employing 25 to 49 men. These fatalities occurred at a rate of 0.90. Strip mines employing 100 to 149 men recorded the lowest nonfatal-injury rate (10.35).

Twenty-six washeries employing 5 to 9 men reported the only fatality for an operation of this type. However, the group had the lowest nonfatal-injury rate (16.84).

The 15 dredging operations employing less than 5 men were injury free in 1956, whereas the two groups employing 5 to 9 and 10 or more men sustained 6 nonfatal injuries for frequency rates of 29.13 and 29.48, respectively.

The 5,754 underground bituminous-coal mine producing less than 25,000 tons each in 1956 had 89 fatalities which resulted in a frequency rate of 2.04 per million man-hours of exposure—the highest number of deaths and the highest rate recorded for any production group. A total of 43 mines producing 750,000 to 1,000,000 tons each had the best overall frequency rate (36.84), and 75 mines producing more than 1,000,000 tons each had the next best rate of 37.53 injuries per million man-hours.

A group of 176 stripping operations, producing 100,000 to 250,000 tons each, recorded the best injury-frequency rate (20.07) for bituminous-coal strip pits. The highest overall rate, 31.76, was in the 62 mines producing 250,000 to 500,000 tons each.

Auger mines producing less than 25,000 tons each had the highest rate (44.53), and those producing 25,000 to 50,000 tons had the lowest (24.85).

Underground Pennsylvania anthracite mines producing 100,000 to 250,000 tons of coal recorded the highest fatal and nonfatal frequency rates, 2.71 and 116.49, respectively. Mines producing 500,000 tons or more had the lowest fatality rate (0.51), and those producing less than 25,000 tons had the lowest nonfatal-injury rate (50.29).

At anthracite stripping operations, mines producing 25,000 to 50,000 tons had the highest fatality rate, 1.74; those producing 250,000 to 500,000 tons had the highest nonfatal-injury rate, 46.14. Mines producing 100,000 to 250,000 tons had the lowest fatality rate, 0.56, and those producing 50,000 to 100,000 tons the lowest nonfatal-injury rate, 23.96.

The highest production groups at washeries recorded the lowest injury rates, whereas at dredging operations the lowest rate was recorded by mines producing less than 25,000 tons each.

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TABLE 12.—*Comparative fatal- and nonfatal-injury data on bituminous-coal mines in the United States, 1955*

	Mines reporting fatal injuries	Mines reporting no fatal injuries	All bituminous-coal mines
Number of mines	345	8, 331	8, 676
Production—short tons	123, 394, 062	339, 125, 319	462, 519, 381
Proportion of total tonnage—percent	26. 7	73. 3	100. 0
Number of employees	56, 746	168, 793	225, 539
Proportion of total employees—percent	25. 2	74. 8	100. 0
Number of employees per mine	164	20	26
Man-days worked	13, 221, 476	34, 084, 718	47, 306, 194
Average days worked per man	233	202	210
Man-hours worked	104, 320, 482	269, 063, 371	373, 383, 853
Average hours worked per man	1, 838	1, 594	1, 656
Production per man-hour—tons	1. 18	1. 26	1. 24
Number of fatalities	360		360
Number of nonfatal injuries	4, 936	11, 030	15, 966
Fatality rate per million man-hours	3. 45		0. 96
Nonfatal-injury rate per million man-hours	47. 32	40. 99	42. 76

TABLE 13.—*Comparative fatal- and nonfatal-injury data on bituminous-coal mines in the United States, 1956*

	Mines reporting fatal injuries	Mines reporting no fatal injuries	All bituminous-coal mines
Number of mines	349	8, 897	9, 246
Production—short tons	142, 950, 537	353, 280, 025	496, 230, 562
Proportion of total tonnage—percent	28. 8	71. 2	100. 0
Number of employees	64, 223	163, 555	227, 778
Proportion of total employees—percent	28. 2	71. 8	100. 0
Number of employees per mine	184	18	25
Man-days worked	14, 638, 628	33, 753, 522	48, 392, 150
Average days worked per man	228	206	212
Man-hours worked	115, 953, 264	267, 488, 953	383, 442, 217
Average hours worked per man	1, 805	1, 635	1, 683
Production per man-hour—tons	1. 23	1. 32	1. 29
Number of fatalities	392		392
Number of nonfatal injuries	5, 138	11, 348	16, 486
Fatality rate per million man-hours	3. 38		1. 02
Nonfatal-injury rate per million man-hours	44. 31	42. 42	42. 99

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TABLE 14.—*Comparative fatal- and nonfatal-injury data on Pennsylvania anthracite mines, 1955*

	Mines reporting fatal injuries	Mines reporting no fatal injuries	All anthracite mines
Number of mines	52	1, 454	1, 506
Production, short tons	8, 770, 775	20, 177, 471	28, 948, 246
Proportion of total tonnage, percent	30. 3	69. 7	100. 0
Number of employees	11, 718	22, 832	34, 550
Proportion of total employees, percent	33. 9	66. 1	100. 0
Number of employees per mine	225	16	23
Man-days worked	2, 480, 487	3, 804, 445	6, 284, 932
Average days worked per man	212	167	182
Man-hours worked	18, 421, 569	27, 573, 193	45, 994, 762
Average hours worked per man	1, 572	1, 208	1, 331
Production per man-hour, ton	0. 48	0. 73	0. 63
Number of fatalities	60		60
Number of nonfatal injuries	1, 588	1, 331	2, 919
Fatality rate per million man-hours	3. 26		1. 30
Nonfatal-injury rate per million man-hours	86. 20	48. 27	63. 46

TABLE 15.—*Comparative fatal- and nonfatal-injury data on Pennsylvania anthracite mines, 1956*

	Mines reporting fatal injuries	Mines reporting no fatal injuries	All anthracite mines
Number of mines	42	1, 466	1, 508
Production, short tons	7, 059, 867	25, 156, 370	32, 216, 237
Proportion of total tonnage, percent	21. 9	78. 1	100. 0
Number of employees	10, 532	21, 975	32, 507
Proportion of total employees, percent	32. 4	67. 6	100. 0
Number of employees per mine	251	15	22
Man-days worked	2, 308, 030	4, 585, 390	6, 893, 420
Average days worked per man	219	209	212
Man-hours worked	17, 070, 646	33, 148, 980	50, 219, 626
Average hours worked per man	1, 621	1, 508	1, 545
Production per man-hour, ton	0. 41	0. 76	0. 64
Number of fatalities	56		56
Number of nonfatal injuries	1, 438	1, 892	3, 330
Fatality rate per million man-hours	3. 28		1. 12
Nonfatal-injury rate per million man-hours	84. 24	57. 08	66. 31

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TABLE 16. – *Number of injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1955*

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Underground mines:						
Underground:						
Falls of roof	178	2, 243	27	170	205	2, 413
Falls of roof or face from equipment knocking out supports	9	75	2	2	11	77
Falls of face or rib	8	594	4	132	12	726
Falls of roof or face from pressure bumps or bursts	----------	66	1	40	1	106
Rush of coal or rock	----------	22	1	75	1	97
Other falling objects	----------	319	----------	80	----------	399
Falls of persons	----------	418	2	334	2	752
Handling materials	1	2, 587	----------	656	1	3, 243
Handtools	----------	658	----------	197	----------	855
Stepping on objects	----------	271	----------	59	----------	330
Striking or bumping	----------	64	----------	9	----------	73
Haulage	61	2, 719	6	275	67	2, 994
Explosions (gas or dust)	2	14	2	5	4	19
Explosives	10	189	2	21	12	210
Electricity	14	466	----------	23	14	489
Machinery	14	2, 320	----------	187	14	2, 507
Suffocation	----------	3	1	2	1	5
Mine fires	----------	15	----------	1	----------	16
All other	4	190	----------	22	4	212
Total	301	13, 233	48	2, 290	349	15, 523
Shaft and slope:						
Falls of roof or face	----------	3	----------	1	----------	4
Other falling objects	----------	5	----------	3	----------	8
Falls of persons	----------	11	----------	9	----------	20
Handling materials	----------	6	----------	4	----------	10
Haulage	1	26	----------	24	1	50
Electricity	1	1	----------	----------	1	1
All other	----------	2	1	----------	1	2
Total	2	54	1	41	3	95
Total, underground	303	13, 287	49	2, 331	352	15, 618
Surface:						
Falling objects	3	41	----------	11	3	52
Falls of persons	----------	236	----------	84	----------	320
Handling materials	----------	457	----------	106	----------	563
Handtools	----------	103	----------	33	----------	136
Haulage	16	502	2	70	18	572
Explosives	1	5	----------	1	1	6
Electricity	5	31	1	7	6	38
Machinery	5	152	----------	36	5	188
All other	2	152	4	54	6	206
Total	32	1, 679	7	402	39	2, 081
Total, underground mines	335	14, 966	56	2, 733	391	17, 699

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TABLE 16.—*Number of injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1955*—Continued

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Strip mines:						
Falls or slides of coal or overburden	1	45		5	1	50
Rushes of coal or rock	1	5			1	5
Other falling objects		24		3		27
Falls of persons	1	149		30	1	179
Handling materials	1	183		47	1	230
Handtools		70		9		79
Haulage	7	143		34	7	177
Explosives	2	8		1	2	9
Electricity		10				10
Machinery	8	228	2	27	10	255
All other	1	103	1	16	2	119
Total	22	968	3	172	25	1, 140
Auger mines:						
Falls of coal or overburden	1	2			1	2
Other falling objects		4				4
Falls of persons		2				2
Handling materials		4				4
Handtools		4				4
Haulage	1	4			1	4
Machinery	1	11			1	11
All other		1				1
Total	3	32			3	32
Washeries			1	13	1	13
Dredges				1		1
Grand total	360	15, 966	60	2, 919	420	18, 885

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TABLE 17.—*Number of injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1956*

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Underground mines:						
Underground:						
Falls of roof	199	2,266	29	175	228	2,441
Falls of roof or face from equipment knocking out supports	2	41	----	1	2	42
Falls of face or rib	9	590	2	152	11	742
Falls of roof or face from pressure bumps or bursts	5	72	----	35	5	107
Rush of coal or rock	----	20	1	98	1	118
Other falling objects	----	316	----	90	----	406
Falls of persons	----	504	----	379	----	883
Handling materials	4	2,765	----	745	4	3,510
Handtools	----	672	----	203	----	875
Stepping on objects	----	262	----	71	----	333
Striking or bumping	----	71	----	5	----	76
Haulage	71	2,869	5	289	76	3,158
Explosions (gas or dust)	5	9	4	11	9	20
Explosives	8	163	1	17	9	180
Electricity	14	506	2	49	16	555
Machinery	18	2,242	----	185	18	2,427
Suffocation	3	8	----	----	3	8
Mine fires	2	31	----	----	2	31
All other	1	196	----	33	1	229
Total	341	13,603	44	2,538	385	16,141
Shaft and slope:						
Falls of roof or face	----	4	----	2	----	6
Other falling objects	1	1	1	16	2	17
Falls of persons	----	10	2	15	2	25
Handling materials	----	3	----	7	----	10
Handtools	----	----	----	2	----	2
Stepping on objects	----	----	----	2	----	2
Haulage	----	21	1	27	1	48
Electricity	----	1	----	2	----	3
Machinery	----	2	----	----	----	2
All other	----	----	----	----	----	----
Total	1	42	4	73	5	115
Total, underground	342	13,645	48	2,611	390	16,256
Surface:						
Rushes of coal or rock	----	2	----	----	----	2
Falling objects	----	43	1	10	1	53
Falls of persons	1	229	1	103	2	332
Handling materials	2	446	----	122	2	568
Handtools	----	102	----	27	----	129
Stepping on objects	----	36	----	11	----	47
Striking or bumping	----	10	----	1	----	11
Haulage	12	501	2	86	14	587
Explosives	----	1	----	1	----	2
Electricity	3	54	----	8	3	62
Machinery	4	141	----	30	4	171
Mine fires	1	4	----	----	1	4
All other	----	91	----	27	----	118
Total	23	1,660	4	426	27	2,086
Total, underground mines	365	15,305	52	3,037	417	18,342

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TABLE 17.—*Number of injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1956*—Continued

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Strip mines:						
Falls or slides of coal or overburden	4	47		7	4	54
Rushes of coal or rock	1	6		3	1	9
Other falling objects		19		7		26
Falls of persons		188		45		233
Handling materials		236		72		308
Handtools		76		12		88
Stepping on objects		17		2		19
Striking or bumping		4				4
Haulage	9	126	1	33	10	159
Explosives	4	11			4	11
Electricity	2	11		1	2	12
Machinery	2	250	1	39	3	289
Mine fires	1	15			1	15
All other	2	77	1	14	3	91
Total	25	1,083	3	235	28	1,318
Auger mines:						
Falls of coal or overburden		3				3
Other falling objects		2				2
Falls of persons		6				6
Handling materials		11				11
Handtools		6				6
Haulage		20				20
Explosions (gas or dust)		4				4
Explosives		1				1
Electricity		1				1
Machinery		36				36
Suffocation	2	1			2	1
Mine fires		2				2
All other		5				5
Total	2	98			2	98
Washeries			1	52	1	52
Dredges				6		6
Grand total	392	16,486	56	3,330	448	19,816

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TABLE 18.—*Days of disability from injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1955*

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Underground mines:						
Underground:						
Falls of roof	1,068,000	165,629	162,000	7,577	1,230,000	173,206
Falls of roof or face from equipment knocking out supports	54,000	15,350	12,000	58	66,000	15,408
Falls of face or rib	48,000	42,418	24,000	6,541	72,000	48,959
Falls of roof or face from pressure bumps or bursts	----------	4,225	6,000	2,373	6,000	6,598
Rushes of coal or rock	----------	394	6,000	2,226	6,000	2,620
Other falling objects	----------	9,957	----------	2,133	----------	12,090
Falls of persons	----------	14,504	12,000	7,994	12,000	22,498
Handling materials	6,000	72,732	----------	13,109	6,000	85,841
Handtools	----------	17,845	----------	1,843	----------	19,688
Stepping on objects	----------	5,422	----------	766	----------	6,188
Striking or bumping	----------	1,361	----------	204	----------	1,565
Haulage	366,000	201,548	36,000	21,425	402,000	222,973
Explosions (gas or dust)	12,000	419	12,000	105	24,000	524
Explosives	60,000	17,202	12,000	957	72,000	18,159
Electricity	84,000	7,719	----------	372	84,000	8,091
Machinery	84,000	147,079	----------	8,217	84,000	155,296
Suffocation	----------	71	6,000	6	6,000	77
Mine fires	----------	607	----------	3	----------	610
All other	24,000	11,228	----------	848	24,000	12,076
Total	1,806,000	735,710	288,000	76,757	2,094,000	812,467
Shaft and slope:						
Falls of roof or face	----------	98	----------	27	----------	125
Other falling objects	----------	175	----------	20	----------	195
Falls of persons	----------	416	----------	526	----------	942
Handling materials	----------	163	----------	104	----------	267
Haulage	6,000	3,122	----------	716	6,000	3,838
Electricity	6,000	12	----------	----------	6,000	12
All other	----------	125	6,000	----------	6,000	125
Total	12,000	4,111	6,000	1,393	18,000	5,504
Total, underground	1,818,000	739,821	294,000	78,150	2,112,000	817,971
Surface:						
Falling objects	18,000	998	----------	193	18,000	1,191
Falls of persons	----------	8,653	----------	2,223	----------	10,876
Handling materials	----------	12,803	----------	2,452	----------	15,255
Handtools	----------	5,543	----------	2,199	----------	7,742
Haulage	96,000	46,714	12,000	2,505	108,000	49,219
Explosives	6,000	6,211	----------	29	6,000	6,240
Electricity	30,000	518	6,000	102	36,000	620
Machinery	30,000	21,636	----------	4,353	30,000	25,989
All other	12,000	7,098	24,000	507	36,000	7,605
Total	192,000	110,174	42,000	14,563	234,000	124,737
Total, underground mines	2,010,000	849,995	336,000	92,713	2,346,000	942,708

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TABLE 18.—*Days of disability from injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1955*—Continued

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Strip mines:						
Falls or slides of coal or overburden	6, 000	1, 621	----------	210	6, 000	1, 831
Rushes of coal or rock	6, 000	176	----------	----------	6, 000	176
Other falling objects	----------	965	----------	38	----------	1, 003
Falls of persons	6, 000	4, 823	----------	577	6, 000	5, 400
Handling materials	6, 000	5, 650	----------	1, 893	6, 000	7, 543
Handtools	----------	4, 632	----------	322	----------	4, 954
Haulage	42, 000	10, 685	----------	10, 295	42, 000	20, 980
Explosives	12, 000	326	----------	55	12, 000	381
Electricity	----------	144	----------	----------	----------	144
Machinery	48, 000	13, 813	12, 000	4, 989	60, 000	18, 802
All other	6, 000	1, 674	6, 000	185	12, 000	1, 859
Total	132, 000	44, 509	18, 000	18, 564	150, 000	63, 073
Auger mines:						
Falls of coal or overburden	6, 000	22	----------	----------	6, 000	22
Other falling objects	----------	74	----------	----------	----------	74
Falls of persons	----------	21	----------	----------	----------	21
Handling materials	----------	27	----------	----------	----------	27
Handtools	----------	24	----------	----------	----------	24
Haulage	6, 000	43	----------	----------	6, 000	43
Machinery	6, 000	552	----------	----------	6, 000	552
All other	----------	1	----------	----------	----------	1
Total	18, 000	764	----------	----------	18, 000	764
Washeries	----------	----------	6, 000	180	6, 000	180
Dredges	----------	----------	----------	10	----------	10
Grand total	2, 160, 000	895, 268	360, 000	111, 467	2, 520, 000	1, 006, 735

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TABLE 19.— *Days of disability from injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1956*

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Underground mines:						
Underground:						
Falls of roof	1, 194, 000	162, 548	174, 000	14, 492	1, 368, 000	177, 040
Falls of roof or face from equipment knocking out supports	12, 000	2, 825	----------	117	12, 000	2, 942
Falls of face or rib	54, 000	29, 016	12, 000	11, 972	66, 000	40, 988
Falls of roof or face from pressure bumps or bursts	30, 000	8, 813	----------	524	30, 000	9, 337
Rushes of coal or rock	----------	371	6, 000	3, 876	6, 000	4, 247
Other falling objects	----------	8, 996	----------	2, 090	----------	11, 086
Falls of persons	----------	15, 278	----------	8, 383	----------	23, 661
Handling materials	24, 000	77, 330	----------	16, 758	24, 000	94, 088
Handtools	----------	25, 446	----------	3, 785	----------	29, 231
Stepping on objects	----------	6, 078	----------	994	----------	7, 072
Striking or bumping	----------	1, 288	----------	112	----------	1, 400
Haulage	426, 000	199, 475	30, 000	33, 104	456, 000	232, 579
Explosions (gas or dust)	30, 000	220	24, 000	554	54, 000	774
Explosives	48, 000	22, 352	6, 000	3, 039	54, 000	25, 391
Electricity	84, 000	6, 055	12, 000	969	96, 000	7, 024
Machinery	108, 000	136, 398	----------	9, 404	108, 000	145, 802
Suffocation	18, 000	92	----------	----------	18, 000	92
Mine fires	12, 000	464	----------	----------	12, 000	464
All other	6, 000	3, 912	----------	1, 224	6, 000	5, 136
Total	2, 046, 000	706, 957	264, 000	111, 397	2, 310, 000	818, 354
Shaft and slope:						
Falls of roof or face	----------	110	----------	4	----------	114
Other falling objects	6, 000	24	6, 000	872	12, 000	896
Falls of persons	----------	143	12, 000	450	12, 000	593
Handling materials	----------	48	----------	96	----------	144
Handtools	----------	----------	----------	10	----------	10
Stepping on objects	----------	----------	----------	6	----------	6
Haulage	----------	1, 046	6, 000	3, 185	6, 000	4, 231
Electricity	----------	14	----------	4	----------	18
Machinery	----------	54	----------	----------	----------	54
All other	----------	----------	----------	----------	----------	----------
Total	6, 000	1, 439	24, 000	4, 627	30, 000	6, 066
Total, underground	2, 052, 000	708, 396	288, 000	116, 024	2, 340, 000	824, 420
Surface:						
Rushes of coal or rock	----------	96	----------	----------	----------	96
Falling objects	----------	1, 185	6, 000	409	6, 000	1, 594
Falls of persons	6, 000	7, 653	6, 000	3, 391	12, 000	11, 044
Handling materials	12, 000	11, 116	----------	2, 832	12, 000	13, 948
Handtools	----------	1, 885	----------	446	----------	2, 331
Stepping on objects	----------	857	----------	63	----------	920
Striking or bumping	----------	145	----------	2	----------	147
Haulage	72, 000	31, 351	12, 000	2, 957	84, 000	34, 308
Explosives	----------	6	----------	13	----------	19
Electricity	18, 000	1, 226	----------	353	18, 000	1, 579
Machinery	24, 000	13, 005	----------	1, 026	24, 000	14, 031
Mine fires	6, 000	31	----------	----------	6, 000	31
All other	----------	1, 068	----------	522	----------	1, 590
Total	138, 000	69, 624	24, 000	12, 014	162, 000	81, 638
Total, underground mines	2, 190, 000	778, 020	312, 000	128, 038	2, 502, 000	906, 058

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TABLE 19.—*Days of disability from injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1956*—Continued

Principal injury agency	Bituminous-coal mines		Pennsylvania anthracite mines		All coal mines	
	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
Strip mines:						
Falls or slides of coal or overburden	24,000	1,470	----	330	24,000	1,800
Rushes of coal or rock	6,000	378	----	410	6,000	788
Other falling objects	----	5,210	----	204	----	5,414
Falls of persons	----	4,889	----	1,331	----	6,220
Handling materials	----	8,097	----	1,876	----	9,973
Handtools	----	1,118	----	314	----	1,432
Stepping on objects	----	520	----	18	----	538
Striking or bumping	----	63	----	----	----	63
Haulage	54,000	7,273	6,000	1,261	60,000	8,534
Explosives	24,000	376	----	----	24,000	376
Electricity	12,000	105	----	13	12,000	118
Machinery	12,000	31,316	6,000	2,832	18,000	34,148
Mine fires	6,000	231	----	----	6,000	231
All other	12,000	1,166	6,000	186	18,000	1,352
Total	150,000	62,212	18,000	8,775	168,000	70,987
Auger mines:						
Falls of coal or overburden	----	14	----	----	----	14
Other falling objects	----	10	----	----	----	10
Falls of persons	----	98	----	----	----	98
Handling materials	----	113	----	----	----	113
Handtools	----	42	----	----	----	42
Haulage	----	464	----	----	----	464
Explosions (gas or dust)	----	76	----	----	----	76
Explosives	----	5	----	----	----	5
Electricity	----	4	----	----	----	4
Machinery	----	824	----	----	----	824
Suffocation	12,000	19	----	----	12,000	19
Mine fires	----	11	----	----	----	11
All other	----	81	----	----	----	81
Total	12,000	1,761	----	----	12,000	1,761
Washeries	----	----	6,000	4,645	6,000	4,645
Dredges	----	----	----	52	----	52
Grand total	2,352,000	841,993	336,000	141,510	2,688,000	983,503

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TABLE 20.– *Average severity of all injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1955* [1]

Principal injury agency	Bituminous-coal mines	Pennsylvania anthracite mines	All coal mines
Underground mines:			
Underground:			
Falls of roof	509.6	860.8	536.0
Falls of roof or face from equipment knocking out supports	825.6	3,014.5	925.1
Falls of face or rib	150.2	224.6	163.9
Falls of roof or face from pressure bumps or bursts	64.0	204.2	117.7
Rush of coal or rock	17.9	108.2	88.0
Other falling objects	31.2	26.7	30.3
Falls of persons	34.7	59.5	45.8
Handling materials	30.4	20.0	28.3
Handtools	27.1	9.4	23.0
Stepping on objects	20.0	13.0	18.8
Striking or bumping	21.3	22.7	21.4
Haulage	204.2	204.4	204.2
Explosions (gas or dust)	776.2	1,729.3	1,066.3
Explosives	387.9	563.3	406.1
Electricity	191.1	16.2	183.1
Machinery	99.0	43.9	94.9
Suffocation	23.7	2,002.0	1,012.8
Mine fires	40.5	3.0	38.1
All other	181.6	38.5	167.0
Total	187.8	156.0	183.1
Shaft and slope:			
Falls of roof or face	32.7	27.0	31.3
Other falling objects	35.0	6.7	24.4
Falls of persons	37.8	58.4	47.1
Handling materials	27.2	26.0	26.7
Haulage	337.9	29.8	192.9
Electricity	3,006.0		3,006.0
All other	62.5	6,000.0	2,041.7
Total	287.7	176.0	239.8
Total, underground	188.2	156.4	183.5
Surface:			
Falling objects	431.8	17.5	348.9
Falls of persons	36.7	26.5	34.0
Handling materials	28.0	23.1	27.1
Handtools	53.8	66.6	56.9
Haulage	275.5	201.5	266.5
Explosives	2,035.2	29.0	1,748.6
Electricity	847.7	762.8	832.3
Machinery	328.9	120.9	290.1
All other	124.0	422.5	205.7
Total	176.6	138.3	169.2
Total, underground mines	186.9	153.7	181.8

See footnote at end of table.

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TABLE 20.—*Average severity of all injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1955* [1]—Continued

Principal injury agency	Bituminous-coal mines	Pennsylvania anthracite mines	All coal mines
Strip mines:			
Falls or slides of coal or overburden	165. 7	42. 0	153. 5
Rushes of coal or rock	1, 029. 3		1, 029. 3
Other falling objects	40. 2	12. 7	37. 1
Falls of persons	72. 2	19. 2	63. 3
Handling materials	63. 3	40. 3	58. 6
Handtools	66. 2	35. 8	62. 7
Haulage	351. 2	302. 8	342. 3
Explosives	1, 232. 6	55. 0	1, 125. 5
Electricity	14. 4		14. 4
Machinery	261. 9	585. 8	297. 4
All other	73. 8	363. 8	114. 5
Total	178. 3	208. 9	182. 9
Auger mines:			
Falls of coal or overburden	2, 007. 3		2, 007. 3
Other falling objects	18. 5		18. 5
Falls of persons	10. 5		10. 5
Handling materials	6. 8		6. 8
Handtools	6. 0		6. 0
Haulage	1, 208. 6		1, 208. 6
Machinery	546. 0		546. 0
All other	1. 0		1. 0
Total	536. 1		536. 1
Washeries		441. 4	441. 4
Dredges		10. 0	10. 0
Grand total	187. 1	158. 3	182. 7

[1] Average severity is the number of days lost per injury. Basic data on number of injuries are listed in table 16 and on days of disability, in table 18.

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TABLE 21.—*Average severity of all injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1956* [1]

Principal injury agency	Bituminous-coal mines	Pennsylvania anthracite mines	All coal mines
Underground mines:			
Underground:			
Falls of roof	550.3	924.0	578.9
Falls of roof or face from equipment knocking out supports	344.8	117.0	339.6
Falls of face or rib	138.6	155.7	142.1
Falls of roof or face from pressure bumps or hursts	504.1	15.0	351.2
Rush of coal or rock	18.6	99.8	86.1
Other falling objects	28.5	23.2	27.3
Falls of persons	30.3	22.1	26.8
Handling materials	36.6	22.5	33.6
Handtools	37.9	18.6	33.4
Stepping on objects	23.2	14.0	21.2
Striking or bumping	18.1	22.4	18.4
Haulage	212.7	214.6	212.9
Explosions (gas or dust)	2,158.6	1,636.9	1,888.8
Explosives	411.4	502.2	420.1
Electricity	173.2	254.3	180.4
Machinery	108.1	50.8	103.8
Suffocation	1,644.7	----	1,644.7
Mine fires	377.7	----	377.7
All other	50.3	37.1	48.4
Total	197.4	145.4	189.3
Shaft and slope:			
Falls of roof or face	27.5	2.0	19.0
Other falling objects	3,012.0	404.2	678.7
Falls of persons	14.3	732.4	466.4
Handling materials	16.0	13.7	14.4
Handtools	----	5.0	5.0
Stepping on objects	----	3.0	3.0
Haulage	49.8	328.0	208.8
Electricity	14.0	2.0	6.0
Machinery	27.0	----	27.0
All other	----	----	----
Total	173.0	371.8	300.6
Total, underground	197.4	151.9	190.1
Surface:			
Rushes of coal or rock	48.0	----	48.0
Falling objects	27.6	582.6	140.6
Falls of persons	59.4	90.3	69.0
Handling materials	51.6	23.2	45.5
Handtools	18.5	16.5	18.1
Stepping on objects	23.8	5.7	19.6
Striking or bumping	14.5	2.0	13.4
Haulage	201.5	170.0	196.9
Explosives	6.0	13.0	9.5
Electricity	337.3	44.1	301.2
Machinery	255.2	34.2	217.3
Mine fires	1,206.2	----	1,206.2
All other	11.7	19.3	13.5
Total	123.4	83.8	115.3
Total, underground mines	189.4	142.5	181.7

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TABLE 21.—*Average severity of all injuries at coal mines in the United States, by principal injury agencies, kind of coal, and general location, 1956* [1]—Continued

Principal injury agency	Bituminous-coal mines	Pennsylvania anthracite mines	All coal mines
Strip mines:			
Falls or slides of coal or overburden	499. 4	47. 1	444. 8
Rushes of coal or rock	911. 1	136. 7	678. 8
Other falling objects	274. 2	29. 1	208. 2
Falls of persons	26. 0	29. 6	26. 7
Handling materials	34. 3	26. 1	32. 4
Handtools	14. 7	26. 2	16. 3
Stepping on objects	30. 6	9. 0	28. 3
Striking or bumping	15. 8	----------	15. 8
Haulage	453. 9	213. 6	405. 5
Explosives	1, 625. 1	----------	1, 625. 1
Electricity	931. 2	13. 0	865. 6
Machinery	171. 9	220. 8	178. 6
Mine fires	389. 4	----------	389. 4
All other	166. 7	412. 4	205. 9
Total	191. 5	112. 5	177. 6
Auger mines:			
Falls of coal or overburden	4. 7	----------	4. 7
Other falling objects	5. 0	----------	5. 0
Falls of persons	16. 3	----------	16. 3
Handling materials	10. 3	----------	10. 3
Handtools	7. 0	----------	7. 0
Haulage	23. 2	----------	23. 2
Explosions (gas or dust)	19. 0	----------	19. 0
Explosives	5. 0	----------	5. 0
Electricity	4. 0	----------	4. 0
Machinery	22. 9	----------	22. 9
Suffocation	4, 006. 3	----------	4, 006. 3
Mine fires	5. 5	----------	5. 5
All other	16. 2	----------	16. 2
Total	137. 6	----------	137. 6
Washeries	----------	200. 8	200. 8
Dredges	----------	8. 7	8. 7
Grand total	189. 2	141. 0	181. 2

[1] Average severity is the number of days lost per injury. Basic data on number of injuries are listed in table 17 and on days of disability, in table 19.

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TABLE 22.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1955*

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES																					
Underground:																					
Falls of roof:																					
While mining	39	1	4	524	1,443.8	54.3	482.8	6		2	44	525.0	28.7	736.8	45	1	6	568	1,137.5	52.3	504.1
While loading	66	2	8	670	761.3	52.3	602.0	16		1	46	300.0	35.9	1,554.8	82	2	9	716	710.0	51.2	676.2
While testing or taking down roof	7			189		46.6	259.2				18		23.3	23.3	7			207		44.6	239.4
While setting or pulling timbers or props	26	2	1	287	750.0	63.7	591.9	3		1	40	300.0	26.8	440.2	29	2	2	327	525.0	59.2	573.4
While preparing to or installing roof bolts	6	1	4	148	341.3	37.1	307.3				1		16.0	16.0	6	1	4	149	341.3	37.0	305.4
While moving machinery from one working place to another	2		1	27	300.0	72.8	475.5				1		273.0	273.0	2		1	28	300.0	80.0	469.0
While moving or placing cars in active working places				15		43.1	43.1				1		1.0	1.0				16		40.5	40.5
While moving, setting up, or operating continuous mining machines	1			10		71.0	610.0								1			10		71.0	610.0
All other	31		3	346	300.0	43.5	531.4	2		1	14	375.0	61.4	778.5	33		4	360	318.8	44.2	542.0
Falls of roof or face material from equipment knocking out supports:																					
By shuttle cars or mobile electric trucks	4		1	16	3,000.0	67.9	1,337.5								4		1	16	3,000.0	67.9	1,337.5
By mine motors or cars	3			31		94.1	615.2	2			2		29.0	3,014.5	5			33		90.2	867.8
By machines	2	1	1	25	600.0	69.8	701.6								2	1	1	25	600.0	69.8	701.6
Falls of face or rib:																					
While mining	3	2	2	238	550.0	43.7	169.4	1			76		23.7	101.3	4	2	2	314	550.0	38.9	153.1
While loading	4		2	223	525.0	49.3	157.4	2		1	21	450.0	63.3	574.2	6		3	244	500.0	50.5	196.9
While testing or taking down roof			1	11	450.0	71.2	102.8										1	11	450.0	71.2	102.8
While setting or pulling timbers or props	1			32		28.6	209.5			1	23	2,400.0	14.9	114.3	1		1	55	2,400.0	22.8	169.4
While preparing or installing roof bolts				18		69.3	69.3											18		69.3	69.3
While moving machinery from one working place to another				6		86.2	86.2				2		65.0	65.0				8		80.9	80.9
While moving, setting up, or operating a continuous mining machine				3		71.0	71.0											3		71.0	71.0
All other			1	55	600.0	39.1	49.1	1			8		10.9	676.3	1		1	63	600.0	35.5	136.0
Falls of roof or face material from pressure bumps or bursts				66		64.0	64.0	1		1	39	1,800.0	14.7	204.2	1		1	105	1,800.0	45.7	117.7
Rushes, rolls, or slides of coal or rock				22		17.9	17.9	1		1	74	300.0	26.0	108.2	1		1	96	300.0	24.2	88.0
Other falling materials or objects:																					
Props or timbers				84		31.0	31.0				17		15.1	15.1				101		28.3	28.3
Objects dropped or thrown by coworkers				26		22.8	22.8				7		19.6	19.6				33		22.1	22.1
Rolling, shifting, or sliding materials			4	189	345.0	26.0	32.6			2	44	300.0	19.4	31.6			6	233	330.0	24.7	32.4
All other			1	15	150.0	21.5	29.6				10		28.6	28.6			1	25	150.0	24.4	29.2
Slips or falls of persons:																					
On same level:																					
While escaping from another hazard				19		62.9	62.9				6		21.0	21.0				25		52.9	52.9
While handling materials				148		30.4	30.4			1	172	300.0	22.8	24.4			1	320	300.0	26.3	27.1
From handtools slipping or breaking				18		25.6	25.6				6		10.0	10.0				24		21.7	21.7

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Caused by electric current				1		20.0	20.0										1		20.0	20.0
While operating or moving machinery				57		46.0	46.0				16		13.5	13.5			73		38.9	38.9
All other			1	114	120.0	33.7	34.4				59		22.8	22.8		1	173	120.0	30.0	30.5
From an elevation:																				
While escaping from another hazard				2		21.5	21.5				2		62.5	62.5			4		42.0	42.0
While handling materials				20		21.7	21.7	2			24		22.4	482.2	2		44		22.1	282.0
While operating or moving machinery				9		17.4	17.4				3		69.0	69.0			12		30.3	30.3
Due to failure of scaffold, ladders, etc.				5		42.6	42.6				18		21.4	21.4			23		26.0	26.0
All other				24		37.7	37.7				27		28.5	28.5			51		32.8	32.8
Handling materials:																				
Props, ties, or timbers	1		10	778	318.0	26.6	37.8			2	179	225.0	20.2	22.5	1	12	957	302.5	25.4	35.0
Coal			4	426	356.3	24.9	27.9				245		19.3	19.3		4	671	356.3	22.8	24.8
Rock or slate			1	294	150.0	25.3	25.7				87		28.6	28.6		1	381	150.0	26.0	26.4
Rails			5	289	135.0	33.1	34.8			1	10	150.0	30.4	41.3		6	299	137.5	33.0	35.0
Wire or wire rope			2	48	225.0	29.2	37.0				4		23.5	23.5		2	52	225.0	28.8	36.0
Roof-bolting materials				21		29.1	29.1										21		29.1	29.1
Handling, moving, or installing conveyor pans			2	179	225.0	20.9	23.2				17		9.4	9.4		2	196	225.0	19.9	22.0
Flying particles while loading car of coal, rock, or gob				7		9.1	9.1				19		6.6	6.6			26		7.3	7.3
Flying particles while handling all other materials				85		9.6	9.6				57		4.2	4.2			142		7.4	7.4
All other			11	425	136.4	23.6	26.4			1	34	150.0	17.6	21.4		12	459	137.5	23.1	26.0
Handtools:																				
Picks				53		22.8	22.8				8		4.9	4.9			61		20.5	20.5
Axes or hatchets			2	51	112.5	13.0	16.7				13		7.1	7.1		2	64	112.5	11.8	14.8
Hammers, or sledges			1	39	150.0	17.3	20.7				3		14.7	14.7		1	42	150.0	17.1	20.2
Crowbars or bars			1	47	75.0	21.7	22.8				23		22.5	22.5		1	70	75.0	22.0	22.7
Shovels				14		27.1	27.1										14		27.1	27.1
Saws				8		5.3	5.3				7		10.3	10.3			15		7.6	7.6
Hand wrenches or other tools used to install roof bolts				13		25.0	25.0										13		25.0	25.0
All tools in hands of fellow workers				27		22.0	22.0				17		9.2	9.2			44		17.0	17.0
Flying particles from hand tools or objects worked on			4	282	1,800.0	12.0	37.0				116		7.2	7.2		4	398	1,800.0	10.6	28.4
All other				116		16.4	16.4				10		8.4	8.4			126		15.8	15.8
Stepping or kneeling on sharp or loose objects:																				
Stepping on nails or other sharp objects				17		9.7	9.7				27		3.1	3.1			44		5.7	5.7
Stepping on loose objects				112		16.7	16.7				21		23.0	23.0			133		17.7	17.7
Knee or hand injuries while working on all fours				142		23.9	23.9				11		17.9	17.9			153		23.4	23.4
Striking or bumping against objects				64		21.3	21.3				9		22.7	22.7			73		21.4	21.4
Haulage:																				
Struck, runover, or squeezed between cars or motors:																				
Coupling or uncoupling		1	46	268	357.9	31.1	97.8	1		2	34	150.0	36.6	203.9	1	1	48	302	349.2	31.7	108.9
Switching, spragging, blocking, or breaking			10	63	420.0	29.1	82.7	1		2	11	1,575.0	25.4	673.5	1		12	74	612.5	28.6	177.8
Pulling, pushing, or dropping			3	40	225.0	40.6	53.5				8		50.8	50.8			3	48	225.0	42.3	53.0
Operating or riding	5		8	60	787.5	47.7	536.4	1		2	10	1,575.0	60.7	750.5	6		10	70	945.0	49.5	568.8
All other	3		7	94	1,050.0	46.3	285.6			1	19	3,000.0	46.2	193.9	3		8	113	1,293.8	46.3	270.8
Squeezed between car or motor and rib, timber, or roof:																				
Coupling or uncoupling	1		2	41	225.0	51.9	195.0	1						6,000.0	2	2	41	225.0	51.9	324.0
Switching, spragging, blocking, or breaking				44		27.0	27.0				7		32.7	32.7			51		27.7	27.7
Pulling, pushing, or dropping			1	38	150.0	50.2	52.8				5		17.0	17.0		1	43	150.0	46.4	48.7
Operating or riding	15	1	4	186	1,650.0	39.0	533.3				9		37.3	37.3	15	1	195	1,650.0	39.0	512.5
All other	1		2	58	225.0	43.7	147.3				4		52.5	52.5	1		62	225.0	44.3	141.4
Derailments	3		4	183	225.0	49.4	147.1			2	14	1,575.0	44.3	235.6	3		197	675.0	49.1	154.0
Rerailing cars or motors	2		24	185	243.8	37.1	117.1				16		32.8	32.8	2		201	243.8	36.7	111.2
Collision (cars or motors under control)	6		2	49	2,400.0	46.4	755.7				1		31.0	31.0	6		50	2,400.0	46.1	743.2
Runaways (cars or motors not under control)	7	1		64		55.6	716.1	2			8		18.1	1,214.5	9	1	72		51.4	776.9
Falling, slipping, or jumping in or from cars or motors	2		2	182	2,325.0	36.6	125.3				23		20.9	20.9	2		205	2,325.0	34.8	113.8

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TABLE 22.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1955*—Continued

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES—continued																					
Underground—Continued																					
Haulage—Continued																					
Shuttle cars or mobile electric trucks:																					
Struck or run over			1	105	4,500.0	44.6	86.7				1		7.0	7.0			1	106	4,500.0	44.3	85.9
Squeezed between shuttle car or mobile electric truck and roof, rib, machine, etc	16		7	242	2,100.0	48.2	461.8				4		44.5	44.5	16		7	246	2,100.0	48.2	455.6
All other			1	120	30.0	27.2	27.2				2		5.5	5.5			1	122	30.0	26.9	26.9
Miscellaneous haulage:																					
Coupling or uncoupling (cars not moving)			1	44	150.0	28.0	30.7				6		18.3	18.3			1	50	150.0	26.8	29.2
Ropes or cables on haulage			1	77	150.0	38.2	39.6				10		13.7	13.7			1	87	150.0	35.4	36.7
Animals				8		50.3	50.3				2		6.5	6.5				10		41.5	41.5
Slips or strains from pulling, pushing, or dropping car by hand		1		77		35.9	112.3				25		24.2	24.2		1		102		33.0	90.9
Riding or getting on or off conveyor belts				73		30.6	30.6				1		5.0	5.0				74		30.2	30.2
Flying particles on haulage				54	187.5	6.4	6.4				6		3.8	3.8				60	187.5	6.1	6.1
All other			4	230		28.1	30.8				40		37.7	37.7			4	270		29.5	31.8
Explosions of gas or coal dust:																					
Matches, igniters, or smoking				3		7.3	7.3	1						6,000.0	1			3		7.3	1,505.5
Electric arc	2			11		36.1	953.6				4		13.0	13.0	2			15		29.9	732.3
High explosives								1			1		53.0	3,026.5	1			1		53.0	3,026.5
Explosives and breaking agents:																					
Industrial explosives:																					
Premature shot or blast				6		13.7	13.7				7		53.7	53.7				13		35.2	35.2
Delayed blast (including digging into)	1		1	2	1,800.0	16.5	1,958.3				1		33.0	33.0	1		1	3	1,800.0	22.0	1,573.2
Shot breaking through rib or pillar	1		1	30	1,800.0	28.8	270.8				2		26.5	26.5	1		1	32	1,800.0	28.7	256.4
Flying fragments	1		3	70	2,300.0	26.7	199.6	1			4		54.8	1,243.8	2		3	74	2,300.0	28.2	265.7
Suffocation from explosives smoke				3		8.3	8.3				1		5.0	5.0				4		7.5	7.5
Caps or detonators			1	1	750.0	20.0	385.0										1	1	750.0	20.0	385.0
Transportation or handling explosives				2		109.0	109.0											2		109.0	109.0
Insufficient warning or improper blasting lines	3			11		56.4	1,330.0								3			11		56.3	1,330.0
All others	1			5		36.0	1,030.0	1			6		45.2	895.9	2			11		41.0	957.8
Cardox				7		66.1	66.1											7		66.1	66.1
Airdox	3		1	45	600.0	21.8	399.6								3		1	45	600.0	21.8	399.6
Electricity (caused by current, including sparks or flashes):																					
Trolley wire or pole	9			49		7.4	937.3				3		20.0	20.0	9			52		8.1	892.2
Transformers, generators, etc				1		2.0	2.0											1		2.0	2.0
Other permanent or semipermanent lighting circuits	1		1	31	1,800.0	11.8	247.4				4		15.8	15.8	1		1	35	1,800.0	12.2	222.4
Locomotives or shuttle cars				57		15.4	15.4				4		6.8	6.8				61		14.8	14.8
Mining or loading machines				24		18.7	18.7				1		4.0	4.0				25		18.1	18.1
Cutout switches or junction boxes	1			11		10.4	509.5				3		5.0	5.0	1			14		9.2	408.6
Cables for mobile mining, loading, or haulage equipment				244		13.3	13.3				6		14.5	14.5				250		13.3	13.3
All other	3			48		10.6	362.9				2		58.0	58.0	3			50		12.5	351.4

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Machinery:																			
While moving mining machines	2		15	252	402.0	51.2	115.0				7		33.3	33.3	2		15	259	402.0	50.7	112.9
While setting up mining machines			6	137	172.5	24.0	30.2				2		17.5	17.5			6	139	172.5	23.9	30.0
While operating mining machines	2		30	404	878.5	35.6	121.0				2		4.5	4.5	2		30	406	878.5	35.4	120.4
Belt conveyors	1		8	73	843.8	35.2	186.8				2		3.5	3.5	1		8	75	843.8	34.4	182.5
Chain, bucket, or shaker conveyors			17	69	514.0	30.0	125.7			1	17	450.0	12.3	36.6			18	86	510.4	26.5	110.3
Loading machines (including self-loading heads)	4		18	342	256.9	32.1	108.8				13		18.3	18.3	4		18	355	256.9	31.6	105.7
While moving loading machines or self-loading heads	3		5	110	270.0	40.6	201.8			1	3	300.0	22.0	91.5	3		6	113	275.0	40.1	198.2
Scraper conveyors				5		16.8	16.8				21		13.0	13.0				26		13.7	13.7
Power drills (except for installing roof bolts)			7	300	735.0	27.0	43.1			2	59	431.5	18.8	32.4			9	359	667.6	25.6	41.3
Power drills used for installing roof bolts		1	2	54	225.0	25.0	136.9									1	2	54	225.0	25.0	136.9
Power equipment (except drills) used for installing roof bolts			1	29	300.0	28.9	38.0				1		18.0	18.0			1	30	300.0	28.6	37.3
While moving any machine except mining or loading machine	1		4	157	393.8	32.0	77.8			3	10	300.0	11.0	77.8	1		7	167	353.6	30.8	77.8
Flying particles set in motion by machinery (except roof-bolting equipment)				111		10.3	10.3				29		5.7	5.7				140		9.3	9.3
Flying particles set in motion by roof-bolting equipment				59		6.4	6.4											59		6.4	6.4
While moving, setting up, or operating continuous mining machines	1		3	26	250.0	38.3	258.2								1		3	26	250.0	38.3	258.2
All other			11	64	606.8	42.9	125.6			1	13	3,000.0	17.5	230.6			12	77	806.3	38.6	142.1
Suffocation (no flames or smoldering):																					
From natural mine gases				1		55.0	55.0											1		55.0	55.0
From foreign gases (gasoline fumes, etc.)				2		8.0	8.0	1			2		3.0	2,002.0	1			4		5.5	1,204.4
Mine fires and suffocation from fires:																					
Mine fires (coal or timber):																					
Initiated by electricity				2		64.0	64.0											2		64.0	64.0
Initiated by all other causes											1		3.0	3.0				1		3.0	3.0
Other fires:																					
Belt conveyors				1		126.0	126.0											1		126.0	126.0
Equipment or material				10		32.4	32.4											10		32.4	32.4
Burning or exploding oil, gasoline, alcohol, or other flammable liquids				2		14.5	14.5											2		14.5	14.5
Miscellaneous causes:																					
Flying particles from draft or wind				10		13.7	13.7				4		4.5	4.5				14		11.1	11.1
Carbide (gas or burns from)				2		10.0	10.0				1		38.0	38.0				3		19.3	19.3
Acetylene or electric welding (burns, flashes, or flying particles)				15		6.8	6.8											15		6.8	6.8
Irritations and burns from battery fluid or other corrosive materials				68		20.1	20.1				5		41.4	41.4				73		21.6	21.6
Burns from controlled coal or wood fires or from steam such as power shovels, machinery, etc				2		10.5	10.5				1		19.0	19.0				3		13.3	13.3
Inrush of water or material	4						6,000.0				4		64.0	64.0	4			4		64.0	3,032.0
All other		1		92		38.9	103.0				7		44.3	44.3		1		99		39.3	98.9
Total, underground	301	15	343	12,875	587.9	34.5	187.8	48		33	2,257	814.8	22.1	156.0	349	15	376	15,132	607.8	32.6	183.1
Shaft and slope:																					
Falls of roof				1		60.0	60.0				1		27.0	27.0				2		43.5	43.5
Falls of face or rib				2		19.0	19.0											2		19.0	19.0
Falling materials or objects:																					
Cages				1		4.0	4.0											1		4.0	4.0
All other				4		42.8	42.8				3		6.7	6.7				7		27.3	27.3

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TABLE 22.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1955*—Continued

Injury agency and general location	Bituminous coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES—continued																					
Shaft and slope—Continued																					
Falls of persons:																					
On same level				6		52.2	52.2				6		59.0	59.0				12		55.6	55.6
Down shaft or slope				2		36.5	36.5											2		36.5	36.5
All other				3		10.0	10.0				3		57.3	57.3				6		33.7	33.7
Handling materials				6		27.2	27.2				4		26.0	26.0				10		26.7	26.7
Haulage:																					
Struck, run over, or squeezed between cars or motors				5		40.8	40.8				3		29.0	29.0				8		36.4	36.4
Squeezed between car or motor and rib, timber, or roof				7		73.7	73.7				3		87.0	87.0				10		77.7	77.7
Derailments			1	1	750.0	22.0	386.0										1	1	750.0	22.0	386.0
Runaways (cars or motors not under control)	1			1		59.0	3,029.5								1			1		59.0	3,029.5
All other			3	8	400.0	46.4	142.8				18		20.4	20.4			3	26	400.0	28.4	66.9
Electricity	1			1		12.0	3,006.0								1			1		12.0	3,006.0
All other				2		62.5	62.5	1						6,000.0	1			2		62.5	2,041.7
Total, shaft and slope	2		4	50	487.5	43.2	287.7	1			41		34.0	176.0	3		4	91	487.5	39.1	239.8
Surface:																					
Falling materials, or objects:																					
Rolling, shifting, or sliding materials	1		1	26	300.0	16.8	240.6				6		21.7	21.7	1		1	32	300.0	17.7	202.0
All other	2			14		18.6	766.3				5		12.6	12.6	2			19		17.1	586.9
Slips or falls of persons:																					
On same level:																					
While handling materials				38		28.2	28.2				30		20.2	20.2				68		24.7	24.7
All other				97		29.3	29.3				18		11.8	11.8				115		26.6	26.6
From an elevation:																					
While handling materials			1	35	600.0	34.0	49.7				12		24.3	24.3			1	47	600.0	31.5	43.4
Due to failure of scaffolds, ladders, etc				21		58.8	58.8				9		61.8	61.8				30		59.7	59.7
All other				44		38.9	38.9				15		37.1	37.1				59		38.4	38.4
Handling materials:																					
Props, ties, or lumber				77		24.9	24.9				11		39.1	39.1				88		26.7	26.7
Coal				19		14.4	14.4				5		11.4	11.4				24		13.8	13.8
Rock or slate			1	68	300.0	22.5	26.6				12		22.9	22.9			1	80	300.0	22.6	26.0
Rails			1	30	150.0	36.2	39.9				2		21.5	21.5			1	32	150.0	35.3	38.8
Flying particles while handling all other materials				23		3.2	3.2				10		18.5	18.5				33		7.8	7.8
All other			10	228	180.0	24.8	31.4				66		22.2	22.2			10	294	180.0	24.2	29.4
Handtools:																					
All handtools			1	48	1,800.0	18.0	54.4				19		17.8	17.8			1	67	1,800.0	18.0	44.2
Flying particles from handtools or objects worked on			1	53	1,800.0	20.3	53.3			1	13	1,800.0	4.7	132.9			2	66	1,800.0	17.3	69.7
Stepping or kneeling on sharp or loose objects				37		11.4	11.4				7		20.7	20.7				44		12.9	12.9
Striking or bumping against objects				10		7.0	7.0				3		14.7	14.7				13		8.8	8.8
Haulage:																					
Mine-gage haulage:																					
Struck, run over, or squeezed between rail equipment:																					
Coupling or uncoupling	1		12	52	356.3	33.8	185.1				6		19.2	19.2	1		12	58	356.3	32.3	171.1

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Switching, spragging, blocking, or braking			1	12	150.0	29.3	38.5				2		4.0	4.0			1	14	150.0	25.6	33.9
Pulling, pushing, or dropping	1		2	11	2,400.0	29.9	794.9				1		5.0	5.0	1		2	12	2,400.0	27.8	742.3
Operating or riding	1			6		27.3	880.6								1			6		27.3	880.6
All other			1	16	3,000.0	61.1	234.0				3		40.0	40.0			1	19	3,000.0	57.8	204.9
Squeezed between rail equipment and construction:																					
Coupling or uncoupling			1	1	300.0	19.0	159.5										1	1	300.0	19.0	159.5
Switching, spragging, blocking, or braking				2		4.0	4.0				1		33.0	33.0				3		13.7	13.7
Pulling, pushing, or dropping				1		59.0	59.0				1		97.0	97.0				2		78.0	78.0
Operating or riding				5		40.6	40.6											5		40.6	40.6
All other	1			4		117.8	1,294.2								1			4		117.8	1,294.2
Derailments				9		48.9	48.9				4		2.8	2.8				13		34.7	34.7
Rerailing cars or motors			3	22	100.0	38.9	46.2				4		21.8	21.8			3	26	100.0	36.3	42.9
Runaways (cars or motors not under control)	2			5		48.0	1,748.6								2			5		48.0	1,748.6
Falling, slipping, or jumping in or from rail equipment				30		22.2	22.2											30		22.2	22.2
Ropes or cables on haulage			2	20	537.5	24.1	70.8			2	1	187.5	14.0	129.7			4	21	362.5	23.6	77.8
All other				46		41.9	41.9				7		9.9	9.9				53		37.7	37.7
Standard-gage haulage (railway)	4		7	133	1,446.4	29.0	263.8	1			29		27.6	226.7	5		7	162	1,446.4	28.8	257.4
Trucks, tractors, automobiles, etc	4		2	34	2,625.0	26.7	754.0	1		1	3	300.0	32.0	1,279.2	5		3	37	1,850.0	27.2	812.3
All other	2		5	57	330.0	36.3	245.6			1	4	150.0	56.3	75.0	2		6	61	300.0	37.6	233.2
Explosives and breaking agents:																					
Premature shot or blast		1					6,000.0									1					6,000.0
Caps or detonators			1	1	150.0	3.0	76.5				1		29.0	29.0			1	2	150.0	16.0	60.7
Transporting or handling explosives	1						6,000.0								1						6,000.0
All other				2		29.0	29.0											2		29.0	29.0
Electricity (caused by current, including sparks or flashes):																					
Trolley wire or pole	1			3		50.0	1,537.5								1			3		50.0	1,537.5
Transformers, generators, etc	2			5		23.6	1,731.1				1		12.0	12.0	2			6		21.7	1,516.3
Other permanent or semipermanent lighting circuits	1			2		20.0	2,013.3				1		47.0	47.0	1			3		29.0	1,521.8
Electric locomotives	1			4		17.0	1,213.6								1			4		17.0	1,213.6
All other				17		8.4	8.4	1			5		8.6	1,007.2	1			22		8.4	268.9
Machinery:																					
Belt conveyors	2		4	29	1,387.5	42.3	536.5				3		19.0	19.0	2		4	32	1,387.5	40.1	495.6
Chain, shaker, or bucket conveyor				7		38.1	38.1			1	4	3,000.0	17.3	613.8			1	11	3,000.0	30.5	278.0
Stationary surface machinery	3		10	40	960.0	32.5	545.2				9		21.0	21.0	3		10	49	960.0	30.3	469.1
All other			4	58	450.0	32.7	59.6			1	18	900.0	7.7	54.6			5	76	540.0	26.8	58.4
Miscellaneous causes:																					
Acetylene or electric welding (burns, flashes, or flying particles)			1	30	4,800.0	10.8	165.3				10		6.9	6.9			1	40	4,800.0	9.8	126.7
All other	2			74		20.0	177.4	4			34		7.3	638.1	6			108		16.0	331.0
Total, surface	32	1	72	1,606	827.4	27.8	176.6	7		7	395	932.1	20.3	138.3	39	1	79	2,001	836.7	26.3	169.2
Total, underground mines	335	16	419	14,531	628.1	33.8	186.9	56		40	2,693	835.3	22.0	153.7	391	16	459	17,224	646.2	31.9	181.8
STRIP MINES																					
Falls or slides of coal or overburden:																					
While mining	1			20		43.9	327.5				2		72.0	72.0	1			22		46.5	305.3
All other				25		29.7	29.7				3		22.0	22.0				28		28.9	28.9
Rushes, rolls, or slides of coal or rock	1			5		35.2	1,029.3								1			5		35.2	1,029.3
Other falling materials or objects			1	23	300.0	28.9	40.2				3		12.7	12.7			1	26	300.0	27.0	37.1
Slips or falls of persons:																					
On same level:																					
While handling materials				26		35.1	35.1				4		17.8	17.8				30		32.8	32.8
While operating or moving machinery				22		15.0	15.0				3		58.7	58.7				25		20.2	20.2
All other				27		29.8	29.8											27		29.8	29.8
From an elevation:																					
While handling materials				19		27.4	27.4				6		5.7	5.7				25		22.2	22.2
While operating or moving machinery				23		39.0	39.0				11		23.3	23.3				34		33.9	33.9
By failure of scaffolding, ladder, or other support	1			5		63.4	1,052.8				1		2.0	2.0	1			6		53.2	902.7
All others				27		38.6	38.6				5		7.6	7.6				32		33.8	33.8

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TABLE 22.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1955*—Continued

Injury agency and general location	Bituminous coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
STRIP MINES—continued																					
Handling materials:																					
Props, ties, or lumber			1	18	150.0	24.3	30.9										1	18	150.0	24.3	30.9
Coal, rock, or slate			1	27	300.0	19.7	29.7			1	5	150.0	35.0	54.2			2	32	225.0	22.1	34.0
All other	1		3	133	400.0	22.8	74.7			2	39	150.0	32.5	38.2	1		5	172	300.0	25.0	66.3
Handtools:																					
All handtools				38		13.9	13.9				5		25.2	25.2				43		15.2	15.2
Flying particles from handtools or objects worked on			2	30	1,800.0	16.8	128.3				4		49.0	49.0			2	34	1,800.0	20.6	119.5
Stepping or kneeling on sharp or loose objects				18		14.9	14.9				6		9.0	9.0				24		13.4	13.4
Striking or bumping against objects				4		20.3	20.3											4		20.3	20.3
Haulage:																					
Mine-gage haulage				12		26.8	26.8				3		7.0	7.0				15		22.8	22.8
Standard-gage haulage (railway)	5		1	54	300.0	35.9	537.3				4		13.0	13.0	5		1	58	300.0	34.3	504.5
Trucks, tractors, automobiles, etc	2	1	2	73	225.0	22.9	258.0			4	23	2,400.0	27.0	378.6	2	1	6	96	1,675.0	23.9	289.0
Explosives:																					
Premature shot or blast				2		95.5	95.5											2		95.5	95.5
Flying fragments	2			6		22.5	1,516.9				1		55.0	55.0	2			7		27.1	1,354.4
Electricity (caused by current, including sparks or flashes):																					
All other				10		14.4	14.4											10		14.4	14.4
Machinery:																					
Power shovels, draglines, bulldozers, etc	6		10	112	685.0	30.4	361.4	2		1	17	4,500.0	24.1	845.5	8		11	129	1,031.8	29.6	426.8
While moving shovels, drills, conveyors, etc	1			17		14.9	347.4				2		9.0	9.0	1			19		14.3	313.6
All other	1		3	86	500.0	21.0	103.4				7		8.9	8.9	1		3	93	500.0	20.1	96.8
Miscellaneous causes:																					
Acetylene or electric welding (burns, flashes, or flying particles)				24		8.4	8.4				4		8.5	8.5				28		8.4	8.4
All other	1			57		19.7	122.8	1			6		16.2	871.0	2			63		19.4	203.4
Total, strip mines	22	1	24	943	610.4	25.3	178.3	3		8	164	1,818.8	24.5	208.9	25	1	32	1,107	912.5	25.2	182.9
AUGER MINES																					
Falls of face or rib:																					
While mining	1						6,000.0								1						6,000.0
All other				2		11.0	11.0											2		11.0	11.0
Other falling materials or objects				4		18.5	18.5											4		18.5	18.5
Slips or falls of persons on same level				2		10.5	10.5											2		10.5	10.5
Handling materials				4		6.8	6.8											4		6.8	6.8
Handtools				4		6.0	6.0											4		6.0	6.0
Haulage:																					
Standard-gage haulage (railway)				1		30.0	30.0											1		30.0	30.0
Trucks, tractors, automobiles, etc	1			3		4.3	1,503.3								1			3		4.3	1,503.3
Machinery:																					
Belt conveyor			2	1	112.5	36.0	87.0										2	1	112.5	36.0	87.0
Power shovels, draglines, bulldozers, etc	1			1		21.0	3,010.5								1			1		21.0	3,010.5
All other			1	6	150.0	20.0	38.6										1	6	150.0	20.0	38.6

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Miscellaneous causes: Flying particles from draft or wind				1		1.0	1.0											1		1.0	1.0
Total, auger	3		3	29	125.0	13.4	536.1								3		3	29	125.0	13.4	536.1
WASHERIES																					
Rushes, rolls or slides of coal or rock								1						6,000.0	1						6,000.0
Handling materials											3		16.0	16.0				3		16.0	16.0
All other											10		13.2	13.2				10		13.2	13.2
Total, washeries								1			13		13.8	441.4	1			13		13.8	441.4
DREDGES																					
Mine fires and suffocation from fires: Burning or exploding oil, gasoline, alcohol or other flammable liquids											1		10.0	10.0				1		10.0	10.0
Grand total	360	17	446	15,503	623.8	33.2	187.1	60		48	2,871	999.2	22.1	158.3	420	17	494	18,374	660.3	31.5	182.7

TABLE 23.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1956*

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries			Average severity				Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent	Temporary total	Permanent partial	Temporary total	All injuries		Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES																					
Underground:																					
Falls of roof:																					
While mining	38	1	5	528	870.0	46.2	459.3	4		1	47	600.0	33.1	503.0	42	1	6	575	825.0	45.1	463.0
While loading	72	2	9	661	691.7	54.3	653.4	13		1	37	4,500.0	84.3	1,678.8	85	2	10	698	1,072.5	55.9	719.2
While testing or taking down roof	17		1	217	75.0	50.2	480.7	1			17		33.1	364.6	18		1	234	75.0	48.9	472.4
While setting or pulling timbers or props	28		2	285	675.0	61.4	593.2	7		1	51	750.0	39.9	759.1	35		3	336	700.0	58.2	619.4
While preparing or installing roof bolts	4		4	155	206.3	37.3	187.7								4		4	155	206.3	37.3	187.7
While moving machinery from one working place to another	4	1	2	41	2,850.0	30.8	770.1								4	1	2	41	2,850.0	30.8	770.1
While moving or placing cars in active working places	2			28		69.7	465.1				1		4.0	4.0	2			29		67.4	450.2
While moving, setting up, or operating continuous mining machines	4			13		28.4	1,433.5								4			13		28.4	1,433.5
All others	30	1	4	306	412.5	46.8	592.3	4		1	18	300.0	59.1	1,102.8	34	1	5	324	390.0	47.5	624.6
Falls of roof or face material from equipment knocking out supports:																					
By shuttle cars or mobile electric trucks				3		91.7	91.7											3		91.7	91.7
By mine motors or cars	2			13		71.2	861.7								2			13		71.2	861.7
By machines				25		65.0	65.0				1		117.0	117.0				26		67.0	67.0
Falls of face or rib:																					
While mining	3		2	261	300.0	35.1	104.3	1		1	82	50.0	48.3	119.2	4		3	343	216.7	38.2	107.9
While loading	3		2	198	2,100.0	36.8	145.2	1			24		22.8	261.8	4		2	222	2,100.0	35.2	158.0
While testing or taking down roof			1	6	1,125.0	32.0	188.1				3		30.7	30.7			1	9	1,125.0	31.6	140.9
While setting or pulling timbers or props	2			31		57.7	417.8				28		28.8	28.8	2			59		44.0	239.3

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TABLE 23.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1956*—Continued

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES—continued																					
Underground—Continued																					
Fall of face or rib—Continued																					
While preparing or installing roof bolts				19		44.8	44.8											19		44.8	44.8
While moving machinery from one working place to another				11		45.9	45.9											11		45.9	45.9
While moving or placing cars in active working places				4		62.3	62.3				1		2.0	2.0				5		50.2	50.2
While moving, setting up, or operating a continuous mining machine	1			1		9.0	3,004.5								1			1		9.0	3,004.5
All other				54		56.9	56.9		1		12		42.8	501.0		1		66		54.3	143.0
Falls of roof or face material from pressure bumps or bursts	5	1		71		39.6	504.1			1	34	176.0	10.2	15.0	5	1	1	105	176.0	30.1	351.2
Rushes, rolls, or slides of coal or rock				20		18.6	18.6	1			98		39.6	99.8	1			118		36.0	86.1
Other falling materials or objects:																					
Props or timbers			3	70	591.7	19.3	42.9				14		17.4	17.4			3	84	591.7	19.0	38.8
Objects dropped or thrown by coworkers				39		13.5	13.5				8		26.9	26.9				47		15.7	15.7
Rolling, shifting, or sliding materials			3	180	400.0	21.4	27.6			2	52	150.0	23.1	27.8			5	232	300.0	21.8	27.7
All other				21		13.8	13.8				14		9.2	9.2				35		11.9	11.9
Slips or falls of persons:																					
On same level:																					
While escaping from another hazard				19		24.8	24.8				17		54.5	54.5				36		38.9	38.9
While handling materials				184		21.7	21.7				185		18.2	18.2				369		19.9	19.9
From hand tools slipping or breaking				35		43.8	43.8				3		15.0	15.0				38		41.5	41.5
While operating or moving machinery				50		32.4	32.4				22		18.6	18.6				72		28.2	28.2
All other				127		30.6	30.6				67		25.2	25.2				194		28.7	28.7
From an elevation:																					
While escaping from another hazard											2		34.0	34.0				2		34.0	34.0
While handling materials				33		42.8	42.8				26		25.8	25.8				59		35.3	35.3
While operating or moving machinery				20		52.0	52.0				7		26.0	26.0				27		45.3	45.3
Due to failure of scaffolds, ladders, etc				6		26.0	26.0				16		31.9	31.9				22		30.3	30.3
All others				30		38.9	38.9				34		15.3	15.3				64		26.4	26.4
Handling materials:																					
Props, ties, or timbers	2		6	765	175.0	25.2	41.8			1	213	75.0	25.3	25.5	2		7	978	160.7	25.2	38.3
Coal				361		26.0	26.0			5	253	300.0	19.3	24.7			5	614	300.0	23.2	25.4
Rock or slate			2	332	450.0	23.4	26.0			1	94	150.0	23.2	24.5			3	426	350.0	23.4	25.6
Rails			10	305	187.5	25.2	30.4				8		42.6	42.6			10	313	187.5	25.7	30.7
Wire or wire ropes			1	61	1,800.0	30.8	59.3				4		15.3	15.3			1	65	1,800.0	29.8	56.7
Roof-bolting materials			1	35	75.0	25.9	27.2										1	35	75.0	25.9	27.2
Handling, moving, or installing conveyor pans	1		3	183	150.0	20.6	54.6			1	22	300.0	18.5	30.8	1		4	205	187.5	20.4	52.0
Flying particles while loading car of coal, rock, or gob				8		7.4	7.4				20		5.3	5.3				28		5.9	5.9

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Flying particles while handling all other materials				111		7.5	7.5				49		4.6	4.6				160		6.7	6.7
All other	1		16	565	300.0	26.3	44.1			1	73	150.0	13.6	15.4	1		17	638	291.2	24.8	40.8
Handtools:																					
Picks				41		9.2	9.2				8		13.0	13.0				49		9.8	9.8
Axes or hatchets			5	38	150.0	19.2	34.4				22		10.2	10.2			5	60	150.0	15.9	26.2
Hammer or sledges				56		17.0	17.0				9		7.9	7.9				65		15.8	15.8
Crowbars or bars				49		17.0	17.0				19		18.2	18.2				68		17.3	17.3
Shovels				8		15.6	15.6											8		15.6	15.6
Saws			1	7	300.0	10.0	46.3										1	7	300.0	10.0	46.3
Hand wrenches or other tools used to install roof bolts				12		10.3	10.3											12		10.3	10.3
All tools in hands of fellow workers				23		20.7	20.7				14		15.6	15.6				37		18.8	18.8
Flying particles from handtools or objects worked on			8	321	1,721.3	16.1	57.6			1	114	1,800.0	6.7	22.3			9	435	1,730.0	13.7	48.4
All other			2	101	112.5	15.3	17.2				16		15.9	15.9			2	117	112.5	15.4	17.0
Stepping or kneeling on sharp or loose objects:																					
Stepping on nails or other sharp objects				25		10.6	10.6				46		5.5	5.5				71		7.3	7.3
Stepping on loose objects				107		24.0	24.0				23		31.6	31.6				130		25.3	25.3
Knee or hand injuries while working on all fours				130		25.0	25.0				2		8.5	8.5				132		24.7	24.7
Striking or bumping against objects				71		18.1	18.1				5		22.4	22.4				76		18.4	18.4
Haulage:																					
Struck, run over, or squeezed between cars or motors:																					
Coupling or uncoupling	1		40	303	411.9	38.7	99.5	1		1	26	150.0	44.4	260.9	2		41	329	405.5	39.2	111.6
Switching, spragging, blocking, or braking	2		11	72	450.0	28.1	223.2				8		37.1	37.1	2		11	80	450.0	29.0	207.2
Pulling, pushing, or dropping			1	36	300.0	38.7	45.8				13		31.6	31.6			1	49	300.0	36.8	42.1
Operating or riding	8		6	79	550.0	52.4	596.1				3		11.7	11.7	8		6	82	550.0	50.9	577.8
All other	4		3	98	1,650.0	31.8	305.4				19		55.4	55.4	4		3	117	1,650.0	35.7	267.1
Squeezed between car or motor and rib, timber, or roof:																					
Coupling or uncoupling	1			36		43.8	204.8			1	2	75.0	69.5	71.3	1		1	38	75.0	45.1	194.8
Switching, spragging, blocking, or braking	2		1	45	300.0	36.1	290.1				6		82.8	82.8	2		1	51	300.0	41.6	267.0
Pulling, pushing, or dropping			1	40	300.0	32.0	38.6				3		67.3	67.3			1	43	300.0	34.5	40.5
Operating or riding	14	1	2	222	450.0	37.8	415.4		1		9		31.2	628.1	14	2	2	231	450.0	37.5	424.0
All other	2		3	51	300.0	38.0	264.9				1		38.0	38.0	2		3	52	300.0	38.0	261.0
Derailments	6	1	10	133	1,207.5	43.5	399.1				21		49.1	49.1	6	1	10	154	1,207.5	44.3	356.1
Rerailing cars or motors	1		21	242	267.9	25.0	67.0			1	19	375.0	22.9	40.6	1		22	261	272.7	24.9	65.1
Collisions (cars or motors under control)	7		3	68	2,600.0	44.9	677.6	3		1	5	4,500.0	57.6	2,532.0	10		4	73	3,075.0	45.7	869.4
Runaways (cars or motors not under control)	6	1	1	54	4,500.0	61.4	803.5	1		5	5	1,875.0	16.8	1,405.4	7	1	6	59	2,312.5	57.6	894.2
Falling, slipping, or jumping in or from cars or motors	1		4	229	1,518.8	31.8	82.8				20		19.2	19.2	1		4	249	1,518.8	30.8	77.7
Shuttle cars or mobile electric trucks:																					
Struck or run over				85		37.2	37.2				2		12.5	12.5				87		36.7	36.7
Squeezed between shuttle car or mobile electric truck and roof, rib, machine, etc	14		8	273	796.9	43.3	346.4			1	5	3,000.0	62.2	551.8	14		9	278	1,041.7	43.7	350.5
All other			5	110	905.0	27.6	65.7				3		124.7	124.7			5	113	905.0	30.2	67.2
Miscellaneous haulage:																					
Coupling or uncoupling (cars not moving)			1	34	300.0	30.3	38.0				6		11.8	11.8			1	40	300.0	27.6	34.2
Ropes, or cable on haulage	1		6	53	725.0	49.8	216.5			1	8	150.0	20.9	35.2	1		7	61	642.9	46.0	192.8
Animals				10		13.2	13.2											10		13.2	13.2
Slips or strains from pulling, pushing, or dropping car by hand				103		28.7	28.7				33		16.3	16.3				136		25.6	25.6
Riding or getting on or off conveyor belts				75		36.1	36.1				2		102.0	102.0				77		37.8	37.8
Flying particles on haulage				49		8.8	8.8				3		6.7	6.7				52		8.6	8.6
All other	1		3	236	375.0	24.2	53.5			1	54	75.0	25.3	26.2	1		4	290	300.0	24.4	48.4
Explosions of gas or coal dust:																					
Electric arc	4			5		38.2	2,687.9				6		44.0	44.0	4			11		41.4	1,630.3
High explosives	1			1		19.0	3,009.5				5		58.0	58.0	1			6		51.5	901.3
All other				3		3.3	3.3	4						6,000.0	4			3		3.3	3,430.0

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TABLE 23.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1956*—Continued

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries			Average severity				Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES—continued																					
Underground—Continued																					
Explosives and breaking agents:																					
Industrial explosives:																					
Premature shot or blast	1	1	2	5	1,800.0	61.8	1,767.7	1		1	2	1,800.0	325.0	2,112.5	2	1	3	7	1,800.0	137.0	1,873.8
Shot breaking through rib or pillar	2			26		26.0	452.7								2			26		26.0	452.7
Flying fragments	1		1	75	1,800.0	20.3	121.0				4		43.5	43.5	1		1	79	1,800.0	21.4	117.2
Suffocation from explosives smoke				7		5.7	5.7				3		6.7	6.7				10		6.0	6.0
Caps or detonators			1	2	1,200.0	66.0	444.0										1	2	1,200.0	66.0	444.0
Insufficient warning or improper blasting lines	2			4		43.0	2,028.7				1		183.0	183.0	2			5		71.0	1,765.0
All other				8		15.1	15.1				6		35.3	35.3				14		23.8	23.8
Cardox	1			6		25.7	879.1								1			6		25.7	879.1
Airdox	1		2	23	3,000.0	27.3	485.7								1		2	23	3,000.0	27.3	485.7
Electricity (caused by current, including sparks or flashes)																					
Trolley wire or pole	4			41		9.3	541.8	2			12		16.0	870.9	6			53		10.8	619.9
Transformers, generators, etc	1			2		19.0	2,012.7				1		1.0	1.0	1			3		13.0	1,509.8
Other permanent or semipermanent lighting circuits	5			34		9.2	777.3				5		17.4	17.4	5			39		10.3	690.9
Locomotives or shuttle cars	2			57		13.4	216.4				7		53.6	53.6	2			64		17.8	199.1
Mining or loading machines	1			20		12.9	298.0				3		8.3	8.3	1			23		12.3	261.8
Cutout switches or junction boxes	1			13		7.9	435.9				5		8.4	8.4	1			18		8.1	323.4
Cables for mobile mining, loading, or hauling equipment				286		12.4	12.4				10		16.7	16.7				296		12.6	12.6
All other				53		12.1	12.1				6		13.3	13.3				59		12.2	12.2
Machinery:																					
While moving mining machines	6		22	228	649.5	41.0	232.9				2		19.5	19.5	6		22	230	649.5	40.8	231.3
While setting up mining machines			6	106	187.5	18.7	27.8										6	106	187.5	18.7	27.8
While operating mining machines			18	364	770.8	36.4	71.0										18	364	770.8	36.4	71.0
Belt conveyors	1		10	65	1,470.0	40.6	307.1				1		5.0	5.0	1		10	66	1,470.0	40.1	303.2
Chain, bucket, or shaker conveyors	1		8	77	300.0	29.0	123.6			3	15	1,950.0	25.1	345.9	1		11	92	750.0	28.4	162.1
Loading machines (including self-loading heads)	6		21	322	562.5	29.9	164.6				10		20.5	20.5	6		21	332	562.5	29.6	160.6
While moving loading machines or self-loading heads	3		7	97	428.6	30.2	223.6				8		39.1	39.1	3		7	105	428.6	30.9	210.8
Scraper conveyors			1		300.0		300.0				27		16.2	16.2			1	27	300.0	16.2	26.4
Power drills (except for installing roof bolts)			3	300	850.0	25.8	34.0			1	62	300.0	23.7	28.1			4	362	712.5	25.5	33.0
Power drills (used for installing roof bolts)			4	69	131.3	29.6	35.2										4	69	131.3	29.6	35.2
Power equipment (except drills) used for installing roof bolts			2	33	169.0	24.7	33.0										2	33	169.0	24.7	33.0
While moving any machine except mining or loading machines	1		2	180	1,575.0	35.3	84.7				11		9.5	9.5	1		2	191	1,575.0	33.8	80.4
Flying particles set in motion by machinery (except roof-bolting equipment)				107		8.8	8.8				34		5.7	5.7				141		8.1	8.1

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Flying particles set in motion by roof-bolting equipment				76		5.3	5.3				1		6.0	6.0				77		5.3	5.3
While moving, setting up, or operating continuous mining machines				33		50.2	50.2											33		50.2	50.2
All other			7	74	582.1	30.9	78.5				10		10.2	10.2			7	84	582.1	28.4	71.0
Suffocation (no flames or smoldering):																					
From natural mine gases	3			3		7.0	3,003.5								3			3		7.0	3,003.5
From foreign gases (gasoline fumes, etc.)				5		14.2	14.2											5		14.2	14.2
Mine fires and suffocation from fires:																					
Other fires:																					
Belt conveyors				2		15.0	15.0											2		15.0	15.0
Equipment or material	2			28		15.0	414.0								2			28		15.0	414.0
Burning or exploding oil, gasoline, alcohol, or other flammable liquid				1		13.0	13.0											1		13.0	13.0
Miscellaneous causes:																					
Flying particles from draft or wind				8		3.8	3.8				1		1.0	1.0				9		3.4	3.4
Carbide (gas or burns from)				2		8.5	8.5											2		8.5	8.5
Acetylene or electric welding (burns, flashes, or flying particles)				22		6.0	6.0											22		6.0	6.0
Irritation and burns from battery fluid or other corrosive materials				59		14.9	14.9				6		34.3	34.3				65		16.7	16.7
Burns from controlled coal or wood fires or from steam such as power shovels, machinery etc				4		2.3	2.3											4		2.3	2.3
All other	1			101		28.2	86.7				26		39.1	39.1	1			127		30.4	77.0
Total, underground	341	10	340	13,253	661.6	31.9	197.4	44	2	35	2,501	1,037.2	25.2	145.4	385	12	375	15,754	696.6	30.8	189.3
Shaft and slope:																					
Falls of roof				4		27.5	27.5				2		2.0	2.0				6		19.0	19.0
Falling materials or objects:																					
Cages				1		24.0	24.0				5		131.4	131.4				6		113.5	113.5
All other	1						6,000.0	1			11		19.5	517.9	2			11		19.5	939.6
Falls of persons:																					
On same level				8		17.3	17.3				9		29.9	29.9				17		23.9	23.9
Down shaft or slope				1		1.0	1.0	2			1		26.0	4,008.7	2			2		13.5	3,006.8
All other				1		4.0	4.0				5		31.0	31.0				6		26.5	26.5
Handling materials				3		16.0	16.0				7		13.7	13.7				10		14.4	14.4
Handtools											2		5.0	5.0				2		5.0	5.0
Stepping or kneeling on sharp or loose object											2		3.0	3.0				2		3.0	3.0
Haulage:																					
Struck, run over, or squeezed between cars or motors				2		25.5	25.5				7		23.1	23.1				9		23.7	23.7
Runaways (cars or motors not under control)				8		41.1	41.1			2	5	1,275.0	32.2	387.3			2	13	1,275.0	37.7	202.7
Persons caught or struck by ropes used for haulage				3		59.7	59.7	1			2		58.0	2,038.7	1			5		59.0	1,049.2
All other				8		60.9	60.9				11		17.8	17.8				19		35.9	35.9
Electricity				1		14.0	14.0				2		2.0	2.0				3		6.0	6.0
Machinery				2		27.0	27.0											2		27.0	27.0
Total, shaft and slope	1			42		34.3	173.0	4		2	71	1,275.0	29.3	371.8	5		2	113	1,275.0	31.1	300.6
Surface:																					
Rushes, rolls, or slides of coal or rock				2		48.0	48.0											2		48.0	48.0
Falling materials or objects:																					
Rolling, shifting, or sliding materials				27		30.7	30.7				3		92.3	92.3				30		36.9	36.9
All other			1	15	150.0	13.7	22.2	1			7		18.9	766.5	1		1	22	150.0	15.3	270.3
Slips or falls of persons:																					
On same level:																					
While handling materials				46		24.3	24.3				33		26.0	26.0				79		25.0	25.0
All other			1	92	1500.0	25.9	41.8				27		45.1	45.1			1	119	1,500.0	30.3	42.5
From an elevation:																					
While handling materials				30		41.9	41.9	1			14		42.9	440.1	1			44		42.3	174.6
All other	1			60		23.2	121.2				29		24.6	24.6	1			89		23.7	90.1

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TABLE 23.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1956*—Continued

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
UNDERGROUND MINES—continued																					
Surface—Continued																					
Handling materials:																					
Props, ties, or lumber			3	63	75.0	21.9	24.3				13		33.2	33.2			3	76	75.0	23.8	25.7
Coal	2		1	27	75.0	21.9	422.2				7		18.3	18.3	2		1	34	75.0	21.1	345.8
Rock or slate			1	71	150.0	21.9	23.7				18		10.7	10.7			1	89	150.0	19.7	21.1
Rails				28		18.2	18.2				4		28.5	28.5				32		19.5	19.5
All other			3	249	200.0	24.2	26.3			1	79	150.0	23.0	24.6			4	328	187.5	23.9	25.9
Handtools:																					
All handtools				58		14.1	14.1				15		18.3	18.3				73		15.0	15.0
Flying particles from handtools or objects worked on				44		24.2	24.2				12		14.3	14.3				56		22.1	22.1
Stepping or kneeling on sharp or loose objects				36		23.8	23.8				11		5.7	5.7				47		19.6	19.6
Striking or bumping against objects				10		14.5	14.5				1		2.0	2.0				11		13.4	13.4
Haulage:																					
Mine-gage haulage:																					
Struck, run over, or squeezed between rail equipment:																					
Coupling or uncoupling			5	47	420.0	25.8	63.7				4		32.3	32.3			5	51	420.0	26.3	61.4
Switching, spragging, blocking, or braking	1			10		22.8	566.2				5		10.4	10.4	1			15		18.7	392.5
Pulling, pushing, or dropping				10		12.4	12.4				1		16.0	16.0				11		12.7	12.7
Operating or riding	2		1	6	600.0	73.8	1,449.2								2		1	6	600.0	73.8	1,449.2
All other	1			18		55.7	368.5				3		39.3	39.3	1			21		53.3	323.6
Squeezed between rail equipment and construction:																					
Switching, spragging, blocking, or braking				3		27.7	27.7											3		27.7	27.7
Operating or riding				4		5.8	5.8											4		5.8	5.8
Derailments				13		41.2	41.2				2		9.0	9.0				15		36.9	36.9
Rerailing cars or motors			3	42	275.0	24.2	40.9				2		13.0	13.0			3	44	275.0	23.7	39.7
Collision (cars or trips under control)	1			11		30.9	528.3				1		51.0	51.0	1			12		32.6	491.6
Runaways (cars or trips not under control)				5		61.8	61.8											5		61.8	61.8
Falling, slipping, or jumping in or from rail equipment			1	31	150.0	32.0	35.7				2		9.5	9.5			1	33	150.0	30.7	34.2
Coupling or uncoupling (cars not moving)				9		55.6	55.6				2		47.5	47.5				11		54.1	54.1
Ropes or cables on haulage			1	13	300.0	25.1	44.7				5		106.6	106.6			1	18	300.0	47.7	61.0
Pulling, pushing, or dropping			1	14	600.0	28.1	66.2				1		28.0	28.0			1	15	600.0	28.1	63.8
All other			1	60	300.0	19.6	24.2				19		19.3	19.3			1	79	300.0	19.5	23.0
Standard-gage haulage (railway)	4	1	5	141	270.0	36.8	241.9			1	29	300.0	36.1	44.9	4	1	6	170	275.0	36.7	209.3
Trucks, tractors, automobiles, etc	3		3	42	1,075.0	48.0	484.2	2			9		17.7	1,105.4	5		3	51	1,075.0	42.6	600.0
Explosives and breaking agents:																					
Caps or detonators				1		6.0	6.0				1		13.0	13.0				2		9.5	9.5
Electricity (caused by current, including sparks or flashes):																					
Trolley wire or pole	1			1		9.0	3,004.5				1		12.0	12.0	1			2		10.5	2,007.0
Transformers, generators, etc				5		22.8	22.8				1		17.0	17.0				6		21.8	21.8

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Other permanent or semipermanent lighting circuits	2			7		7.4	1,339.1				1		21.0	21.0	2			8		9.1	1,207.3
All other			1	40	600.0	11.3	25.6				5		60.6	60.6			1	45	600.0	16.8	29.4
Machinery:																					
Belt conveyors	2		4	17	643.8	49.1	670.0				3		36.7	36.7	2		4	20	643.8	47.3	596.9
Chain, shaker, or bucket conveyors	2		1	4	1,800.0	36.8	1,992.4				2		2.5	2.5	2		1	6	1,800.0	25.3	1,550.2
Power shovels, draglines, bulldozers, etc				5		19.0	19.0			1	3	150.0	22.7	54.5			1	8	150.0	20.4	34.8
Stationary surface machinery			4	29	918.8	17.1	126.4			1	10	300.0	29.4	54.0			5	39	795.0	20.3	108.3
All other			4	73	450.0	21.7	43.9				10		9.9	9.9			4	83	450.0	20.3	40.0
Mine fires and suffocation from fire:																					
Burning or exploding oil, gasoline, alcohol, or other flammable liquids	1			4		7.8	1,206.2								1			4		7.8	1,206.2
Miscellaneous causes:																					
Irritations and burns from battery fluid, or other corrosive materials			1	8	11.0	7.9	8.2				2		39.0	39.0			1	10	11.0	14.1	13.8
All other				82		12.1	12.1				25		17.8	17.8				107		13.4	13.4
Total, surface	23	1	46	1,613	491.5	25.4	123.4	4		4	422	225.0	26.3	83.8	27	1	50	2,035	470.2	25.6	115.3
Total, underground mines	365	11	386	14,908	641.3	31.2	189.4	52	2	41	2,994	969.5	25.5	142.5	417	13	427	17,902	672.8	30.2	181.7
STRIP MINES																					
Falls or slides of coal or overburden:																					
While mining	3			30		22.1	565.6								3			30		22.1	565.6
All other	1			17		47.4	378.1				7		47.1	47.1	1			24		47.3	285.4
Rushes, rolls, or slides of coal or rock	1			6		63.0	911.1				3		136.7	136.7	1			9		87.6	678.8
Other falling materials or objects			1	18	4,500.0	39.4	274.2				7		29.1	29.1			1	25	4,500.0	36.6	208.2
Slips or falls of persons:																					
On same level:																					
While handling materials				39		19.3	19.3				12		27.3	27.3				51		21.2	21.2
While operating or moving machinery				11		9.6	9.6				7		14.6	14.6				18		11.6	11.6
All other				29		21.3	21.3				6		29.8	29.8				35		22.7	22.7
From an elevation:																					
While handling materials				15		39.1	39.1				8		29.6	29.6				23		35.8	35.8
While operating or moving machinery				51		18.2	18.2				12		40.4	40.4				63		22.4	22.4
By failure of scaffolding, ladders, or other supports				10		46.5	46.5											10		46.5	46.5
All other				33		43.5	43.5											33		43.5	43.5
Handling materials:																					
Props, ties, or lumber				24		29.2	29.2				6		18.0	18.0				30		26.9	26.9
Coal, rock, or slate				30		46.8	46.8				14		19.5	19.5				44		38.1	38.1
All other			8	174	333.1	19.1	32.9			1	51	300.0	23.4	28.8			9	225	329.4	20.1	32.0
Handtools: All handtools				76		14.7	14.7				12		26.2	26.2				88		16.3	16.3
Stepping or kneeling on sharp or loose objects				17		30.6	30.6				2		9.0	9.0				19		28.3	28.3
Striking or bumping against objects				4		15.8	15.8											4		15.8	15.8
Haulage:																					
Mine-gage haulage				14		45.6	45.6				3		14.0	14.0				17		40.0	40.0
Standard-gage haulage (railway)	3		2	40	1,200.0	27.3	477.6				2		162.5	162.5	3		2	42	1,200.0	33.7	464.2
Trucks, tractors, automobiles, etc	6			70		44.9	515.1	1			28		31.9	237.7	7			98		41.2	438.5
Explosives:																					
Premature shot or blast	4			1		47.0	4,809.4								4			1		47.0	4,809.4
All other				10		32.9	32.9											10		32.9	32.9
Electricity (caused by current, including sparks or flashes):																					
Power or lighting circuits	1			2		4.5	2,003.0				1		13.0	13.0	1			3		7.3	1,505.5
Contact with mining machine or loading machine	1			2		9.5	2,006.3								1			2		9.5	2,006.3
All other				7		11.0	11.0											7		11.0	11.0
Machinery:																					
Power shovels, draglines, bulldozers, etc	2	1	9	116	1,025.0	34.9	244.3			3	17	600.0	31.5	116.8	2	1	12	133	918.8	34.5	227.1
While moving shovels, drills, conveyors, etc			1	14	450.0	27.0	55.2	1			2		18.0	2,012.0	1		1	16	450.0	25.9	381.3
All other			6	103	1,412.5	26.6	102.9				17		27.1	27.1			6	120	1,412.5	26.7	92.7

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TABLE 23.—*Number and average severity of injuries at coal mines in the United States, by kind of coal, principal injury agencies, general location, and degree of injury, 1956*—Continued

Injury agency and general location	Bituminous-coal mines							Anthracite mines							All coal mines						
	Number of injuries				Average severity			Number of injuries				Average severity			Number of injuries				Average severity		
	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries	Fatal	Permanent		Temporary total	Permanent partial	Temporary total	All injuries
		Total	Partial						Total	Partial						Total	Partial				
STRIP MINES—continued																					
Mine fires and suffocation from fires:																					
Burning or exploding oil, gasoline, alcohol, or other flammable liquids	1			15		15.4	389.4								1			15		15.4	389.4
Miscellaneous causes:																					
Acetylene or electric welding (burns, flashes, or flying particles)				28		7.8	7.8				2		17.0	17.0				30		8.4	8.4
All other	2		1	48	300.0	13.5	253.9	1			12		12.7	473.2	3		1	60	300.0	13.4	298.5
Total, strip mines	25	1	28	1,054	1,000.5	26.8	191.5	3		4	231	525.0	28.9	112.5	28	1	32	1,285	941.1	27.1	177.6
AUGER MINES																					
Falls of face or rib: While mining and loading				3		4.7	4.7											3		4.7	4.7
Slips or falls of persons:																					
On same level				4		7.8	7.8											4		7.8	7.8
From an elevation				2		33.5	33.5											2		33.5	33.5
Handling materials				11		10.3	10.3											11		10.3	10.3
Handtools				6		7.0	7.0											6		7.0	7.0
Haulage				20		23.2	23.2											20		23.2	23.2
Machinery:																					
While moving conveyors, drills, shovels, etc			1	5	75.0	7.8	19.0										1	5	75.0	7.8	19.0
All other			1	29	300.0	14.1	23.7										1	29	300.0	14.1	23.7
Suffocation:																					
Suffocation from natural mine gases and fumes from oil and gasoline motors	2			1		19.0	4,006.3								2			1		19.0	4,006.3
Miscellaneous causes: All other				15		12.5	12.5											15		12.5	12.5
Total, auger	2		2	96	187.5	14.4	137.6								2		2	96	187.5	14.4	137.6
WASHERIES																					
Slips or falls of persons											11		12.9	12.9				11		12.9	12.9
Handling materials											17		15.4	15.4				17		15.4	15.4
Haulage											9		27.6	27.6				9		27.6	27.6
Machinery:																					
Belt conveyors										1	1	3,600.0	37.0	1,818.5			1	1	3,600.0	37.0	1,818.5
Power shovels, draglines, bulldozers, and buckets								1						6,000.0	1						6,000.0
All other											13		27.5	27.5				13		27.5	27.5
Total, washeries								1		1	51	3,600.0	20.5	200.8	1		1	51	3,600.0	20.5	200.8
DREDGES																					
All causes											6		8.7	8.7				6		8.7	8.7
Grand total	392	12	416	16,058	663.3	30.8	189.2	56	2	46	3,282	988.1	25.6	141.0	448	14	462	19,340	695.6	29.9	181.2

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TABLE 24.—*Number of injuries, average severity, and injury rates at bituminous-coal mines in the United States, by part of body injured, 1955*

General location and part of body injured	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
Underground mines:														
Underground (including shaft and slope):														
Head	66			653	653	719	5.6		23.1	571.7	1,482.81	56.47	0.25	2.45
Eye			7	828	835	835	6.5	1,800.0	9.8	24.8		77.46		3.13
Trunk	84	8	7	3,269	3,284	3,368	26.4	671.4	38.2	202.3	1,887.21	664.40	.31	12.30
Hernia				145	145	145	1.1		54.9	54.9		29.80		.54
Arm, including wrist	1		8	562	570	571	4.5	3,735.0	36.3	98.5	22.47	188.21	(5)	2.13
Hand and finger			261	2,168	2,429	2,429	19.0	331.1	23.7	56.8		516.34		9.10
Leg, including ankle	1	2	16	2,135	2,153	2,154	16.9	2,452.5	45.4	71.6	22.47	554.98	(5)	8.06
Foot and toe		1	46	1,473	1,520	1,520	11.9	652.8	34.3	56.9		324.07		5.69
Multiple	145	4	2	889	895	1,040	8.1	375.0	45.7	899.4	3,257.69	244.70	.54	3.35
Not stated	6			803	803	809			37.8	82.1	134.80	113.81	.02	3.01
Total	303	15	347	12,925	13,287	13,590		586.8	34.5	188.2	6,807.45	2,770.24	1.13	49.75
Surface:														
Head	4			61	61	65	4.1		12.9	381.3	388.68	12.73	.06	.99
Eye			2	122	124	124	7.9	1,800.0	9.5	38.4		77.14		2.01
Trunk	8			378	378	386	24.5		28.7	152.4	777.36	175.55	.13	6.12
Hernia				33	33	33	2.1		52.1	52.1		27.86		.53
Arm, including wrist			1	81	82	82	5.2	4,500.0	31.9	86.4		114.77		1.33
Hand and finger			58	250	308	308	19.5	292.7	25.3	75.6		377.26		4.99
Leg, including ankle			6	268	274	274	17.4	4,000.0	37.0	123.8		549.16		4.44
Foot and toe			3	179	182	182	11.5	1,700.0	27.4	55.0		161.97		2.95
Multiple	20	1	2	101	104	124	7.9	2,700.0	26.8	1,081.5	1,943.41	228.38	.32	1.68
Not stated				133	133	133			27.6	27.6		59.45		2.15
Total	32	1	72	1,606	1,679	1,711		827.4	27.8	176.6	3,109.45	1,784.28	.52	27.19
Total, underground mines	335	16	419	14,531	14,966	15,301		628.1	33.8	186.9	6,113.00	2,585.08	1.02	45.52
Strip mines:														
Head	5			60	60	65	7.1		16.4	476.7	696.47	22.89	.12	1.39
Eye			2	64	66	66	7.2	1,800.0	14.7	68.8		105.47		1.53
Trunk	6			250	250	256	27.9		24.5	164.6	835.77	142.34	.14	5.80
Hernia				19	19	19	2.1		35.6	35.6		15.69		.44
Arm, including wrist				59	59	59	6.4		33.2	33.2		45.46		1.37
Hand and finger			21	120	141	141	15.3	411.9	20.6	78.8		258.09		3.27
Leg, including ankle	2	1		153	154	156	17.0		32.0	146.8	278.59	253.10	.05	3.58
Foot and toe			1	75	76	76	8.3	2,400.0	24.1	55.4		97.67		1.76
Multiple	8			73	73	81	8.8		32.0	621.5	1,114.36	54.30	.19	1.69
Not stated	1			70	70	71			23.6	107.7	139.29	38.31	.02	1.63
Total	22	1	24	943	958	990		610.4	25.3	178.3	3,064.48	1,033.31	.51	22.47
Auger mines:														
Head				3	3	3	8.6		3.0	3.0		5.99		2.00
Eye				2	2	2	5.7		9.0	9.0		11.98		1.33
Trunk				3	3	3	8.6		11.7	11.7		23.30		2.00
Hernia				1	1	1	2.9		38.0	38.0		25.30		.67
Arm, including wrist				5	5	5	14.3		9.4	9.4		31.29		3.33
Hand and finger			3	6	9	9	25.7	125.0	11.7	49.4		296.26		5.99
Leg, including ankle	1			5	5	6	17.1		16.6	1,013.8	3,994.45	55.26	.67	3.33
Foot and toe				4	4	4	11.4		22.3	22.3		59.25		2.66
Multiple	2					2	5.7			6,000.0	7,988.90		1.33	
Not stated														
Total	3		3	29	32	35		125.0	13.4	536.1	11,983.35	538.63	2.00	21.30
Grand total	360	17	446	15,503	15,966	16,326		623.8	33.2	187.1	5,784.93	2,397.71	.96	42.76

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For underground injuries, 100 percent represents a total of 12,781 injuries; for surface, 100 percent represents a total of 1,578 injuries; for strip mines, 100 percent represents a total of 919 injuries; and for auger mines, 100 percent represents a total of 35 injuries for which part of body was stated.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Less than 0.005.

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TABLE 25.—*Number of injuries, average severity, and injury rates at bituminous-coal mines in the United States, by part of body injured, 1956*

General location and part of body injured	Number of injuries						Distribution of all injuries percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
Underground mines:														
Underground (including shaft and slope):														
Head	81			679	679	760	5.6		23.4	660.4	1,790.63	58.55	0.30	2.50
Eye	1	1	16	895	912	913	6.7	1,760.6	10.8	54.6	22.11	161.64	(5)	3.36
Trunk	94	6	3	3,513	3,522	3,616	26.7	600.0	34.6	200.0	2,078.02	587.20	.35	12.98
Hernia	1			145	145	146	1.1		67.0	107.6	22.11	35.79	(5)	.53
Arm, including wrist			4	674	678	678	5.0	3,825.0	31.6	54.0		134.85		2.50
Hand and finger			265	2,373	2,638	2,638	19.5	373.4	23.0	58.2		566.01		9.72
Leg, including ankle	3	2	15	2,155	2,172	2,175	16.0	3,315.0	40.5	76.8	66.32	549.20	.01	8.00
Foot and toe		1	34	1,563	1,598	1,598	11.8	831.6	32.3	53.0		312.25		5.89
Multiple	146		3	881	884	1,030	7.6	900.0	43.6	890.4	3,227.56	151.58	.54	3.26
Not stated	16			417	417	433			34.5	254.9	353.71	52.97	.06	1.54
Total	342	10	340	13,295	13,645	13,987		661.6	31.9	197.4	7,560.46	2,610.04	1.26	50.27
Surface:														
Head	4			81	81	85	5.2		21.0	302.3	383.73	27.17	.06	1.30
Eye				129	129	129	7.9		11.7	11.7		24.08		2.06
Trunk	5		1	406	407	412	25.1	1,500.0	25.1	101.2	479.67	186.81	.08	6.51
Hernia				36	36	36	2.2		43.9	43.9		25.25		.58
Arm, including wrist	1			82	82	83	5.1		32.8	104.7	95.93	43.03	.02	1.31
Hand and finger			41	306	347	347	21.2	361.0	22.7	62.6		347.55		5.55
Leg, including ankle	1	1	2	240	243	244	14.9	3,000.0	30.6	103.8	95.93	309.14	.02	3.89
Foot and toe			1	180	181	181	11.0	300.0	28.0	29.5		85.25		2.89
Multiple	12		1	110	111	123	7.5	11.0	26.1	608.8	1,151.20	46.05	.19	1.77
Not stated				43	43	43			27.5	27.5		18.88		.69
Total	23	1	46	1,613	1,660	1,683		491.5	25.4	123.4	2,206.46	1,113.21	.37	26.54
Total, underground mines	365	11	386	14,908	15,305	15,670		641.3	31.2	189.4	6,557.76	2,329.71	1.09	45.83
Strip mines:														
Head	3			66	66	69	6.4		25.4	285.2	384.61	35.88	.06	1.41
Eye			1	102	103	103	9.6	1,800.0	9.4	26.7		58.85		2.20
Trunk	5			300	300	305	28.4		23.3	121.2	641.01	149.04	.11	6.41
Hernia				25	25	25	2.3		53.2	53.2		28.44		.53
Arm, including wrist			1	70	71	71	6.6	3,600.0	42.3	92.4		140.15		1.52
Hand and finger		1	22	141	164	164	15.3	748.4	24.2	157.8		552.87		3.50
Leg, including ankle			1	156	157	157	14.6	4,500.0	36.8	65.2		218.67		3.35
Foot and toe			2	95	97	97	9.0	675.0	23.0	36.4		75.45		2.07
Multiple	15		1	66	67	82	7.6	300.0	31.6	1,126.7	1,923.04	51.02	.32	1.43
Not stated	2			33	33	35			26.8	368.2	256.41	18.93	.04	.71
Total	25		28	1,054	1,083	1,108		1,000.5	26.8	191.5	3,205.07	1,329.29	.53	23.14
Auger mines:														
Head				7	7	7	7.3		7.1	7.1		18.62		2.61
Eye				4	4	4	4.2		4.0	4.0		5.96		1.49
Trunk	2			22	22	24	25.0		14.5	513.3	4,468.17	118.41	.74	8.19
Hernia														
Arm, including wrist				9	9	9	9.4		19.1	19.1		64.04		3.35
Hand and finger			2	16	18	18	18.8	187.5	11.6	31.1		208.51		6.70
Leg, including ankle				10	10	10	10.4		25.3	25.3		94.20		3.72
Foot and toe				13	13	13	13.5		13.4	13.4		64.79		4.84
Multiple				11	11	11	11.5		16.9	16.9		69.26		4.10
Not stated				4	4	4			8.0	8.0		11.92		1.49
Total	2		2	96	98	100		187.5	14.4	137.6	4,468.17	655.70	.74	36.49
Grand total	392	12	416	16,058	16,486	16,878		663.3	30.8	189.2	6,133.91	2,195.88	1.02	42.99

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For underground injuries, 100 percent represents a total of 13,554 injuries; for surface, 100 percent represents a total of 1,640 injuries; for strip mines, 100 percent represents a total of 1,073 injuries; and for auger mines, 100 percent represents a total of 96 injuries for which part of body was stated.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Less than 0.005.

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TABLE 26.—*Number of injuries, average severity, and injury rates at Pennsylvania anthracite mines, by part of body injured, 1955*

General location and part of body injured	Number of injuries					All injuries	Distribution of all injuries percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal						Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
Underground mines:														
Underground (including shaft and slope):														
Head	12			180	180	192	8.2		11.8	386.1	2,671.33	79.06	0.45	6.68
Eye			1	280	281	281	12.0	1,800.0	5.7	12.1		126.18		10.43
Trunk	20			400	400	420	17.9		23.1	307.7	4,452.21	342.75	.74	14.84
Hernia				15	15	15	.6		62.5	62.5		34.76		.56
Arm, including wrist			1	117	118	118	5.0	300.0	18.6	21.0		91.94		4.38
Hand and finger			21	450	471	471	20.1	423.2	23.1	41.0		716.10		17.47
Leg, including ankle	1		4	397	401	402	17.1	3,000.0	34.8	79.2	222.61	958.38	.04	14.88
Foot and toe			6	228	234	234	10.0	650.0	17.4	33.6		292.14		8.68
Multiple	16			196	196	212	9.0		30.1	480.7	3,561.77	219.23	.59	7.27
Not stated				35	35	35			30.0	30.0		38.96		1.30
Total	49		33	2,298	2,331	2,380		814.8	22.3	156.4	10,907.92	2,899.50	1.82	86.48
Surface (including washeries and dredges):														
Head				22	22	22	5.2		7.0	7.0		11.90		1.71
Eye			1	43	44	44	10.4	1,800.0	5.8	46.6		159.49		3.42
Trunk	3			95	95	98	23.1		19.3	202.4	1,400.39	142.53	.23	7.39
Hernia				9	9	9	2.1		88.7	88.7		62.08		.70
Arm, including wrist				24	24	24	5.7		32.6	32.6		60.84		1.87
Hand and finger			4	62	66	66	15.6	356.3	15.2	35.8		184.07		5.13
Leg, including ankle			1	64	65	65	15.3	3,000.0	26.5	72.2		365.19		5.06
Foot and toe			1	42	43	43	10.1	300.0	22.9	29.3		98.10		3.35
Multiple	5			48	48	53	12.5		17.0	581.5	2,333.98	63.56	.39	3.73
Not stated														
Total	8		7	409	416	424		932.1	20.1	148.0	3,734.37	1,147.77	.62	32.36
Total, underground mines	57		40	2,707	2,747	2,804		835.3	22.0	155.1	8,591.56	2,333.87	1.43	69.01
Strip mines:														
Head	1			11	11	12	6.9		13.4	512.3	969.58	23.75	.16	1.78
Eye				16	16	16	9.1		16.5	16.5		42.66		2.59
Trunk	1			35	35	36	20.6		36.3	202.0	969.58	205.39	.16	5.66
Hernia				2	2	2	1.1		144.5	144.5		46.70		.32
Arm, including wrist				11	11	11	6.3		12.5	12.5		22.30		1.78
Hand and finger			5	22	27	27	15.4	210.0	20.9	55.9		244.01		4.36
Leg, including ankle			3	38	41	41	23.4	4,500.0	15.8	343.9		2,278.67		6.63
Foot and toe				18	18	18	10.3		32.7	32.7		95.02		2.91
Multiple	1			11	11	12	6.9		23.3	521.3	969.58	41.37	.16	1.78
Not stated														
Total	3		8	164	172	175		1,818.8	24.5	208.9	2,908.73	2,999.87	.48	27.79
Grand total	60		48	2,871	2,919	2,979		999.2	22.1	158.3	7,826.98	2,423.47	1.30	63.46

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For underground injuries, 100 percent represents a total of 2,345 injuries; for surface, 100 percent represents a total of 424 injuries; and for strip mines, 100 percent represents a total of 175 injuries for which part of body was stated.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

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TABLE 27.—*Number of injuries, average severity, and injury rates at Pennsylvania anthracite mines, by part of body injured, 1956*

General location and part of body injured	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
Underground mines:														
Underground (including shaft and slope):														
Head	12	.....	.....	194	194	206	7.9	.....	21.3	369.6	2,601.81	149.28	0.43	7.01
Eye	.....	.....	2	265	267	267	10.3	1,800.0	6.8	20.2	.....	195.03	.....	9.65
Trunk	15	2	1	502	505	520	20.0	176.0	25.0	220.6	3,252.27	893.40	.54	18.25
Hernia	.....	.....	.....	21	21	21	.8	.....	71.3	71.3	.....	54.10	.....	.76
Arm, including wrist	.....	.....	.....	148	148	148	5.7	.....	23.4	23.4	.....	125.36	.....	5.35
Hand and finger	.....	.....	22	482	504	504	19.4	346.6	20.0	34.2	.....	623.42	.....	18.21
Leg, including ankle	1	.....	6	388	394	395	15.2	3,500.0	39.4	107.0	216.82	1,310.84	.04	14.24
Foot and toe	.....	.....	4	288	292	292	11.2	975.0	22.9	36.0	.....	379.47	.....	10.55
Multiple	19	.....	2	224	226	245	9.4	1,275.0	39.2	511.6	4,119.54	409.64	.69	8.17
Not stated	1	.....	.....	60	60	61	.....	.....	24.1	122.0	216.82	52.14	.04	2.17
Total	48	2	37	2,572	2,611	2,659	.....	1,050.0	25.3	151.9	10,407.25	4,192.68	1.73	94.35
Surface (including washeries and dredges):														
Head	3	.....	.....	30	30	33	7.0	.....	17.4	561.3	1,190.00	34.58	.20	1.98
Eye	.....	.....	.....	41	41	41	8.7	.....	17.1	17.1	.....	46.48	.....	2.71
Trunk	.....	.....	.....	100	100	100	21.3	.....	22.5	22.5	.....	148.55	.....	6.61
Hernia	.....	.....	.....	11	11	11	2.3	.....	65.3	65.3	.....	47.47	.....	.73
Arm, including wrist	.....	.....	1	25	26	26	5.5	3,600.0	23.8	161.3	.....	277.27	.....	1.72
Hand and finger	.....	.....	3	63	66	66	14.0	250.0	19.0	29.5	.....	128.92	.....	4.36
Leg, including ankle	.....	.....	.....	78	78	78	16.6	.....	30.2	30.2	.....	155.89	.....	5.16
Foot and toe	.....	.....	1	65	66	66	14.0	150.0	25.2	27.1	.....	118.41	.....	4.36
Multiple	2	.....	.....	47	47	49	10.4	.....	38.6	281.9	793.33	119.93	.13	3.11
Not stated	.....	.....	.....	19	19	19	.....	.....	21.7	21.7	.....	27.30	.....	1.26
Total	5	.....	5	479	484	489	.....	900.0	25.5	95.5	1,983.33	1,104.78	.33	32.00
Total, underground mines	53	.....	42	3,051	3,095	3,148	.....	1,032.2	25.4	143.2	7,430.07	3,101.35	1.24	72.31
Strip mines:														
Head	.....	.....	.....	12	12	12	5.0	.....	26.6	26.6	.....	42.99	.....	1.62
Eye	.....	.....	.....	15	15	15	6.3	.....	7.1	7.1	.....	14.42	.....	2.02
Trunk	1	.....	.....	62	62	63	26.5	.....	26.8	121.6	808.56	223.57	.13	8.36
Hernia	.....	.....	.....	5	5	5	2.1	.....	78.2	78.2	.....	52.69	.....	.67
Arm, including wrist	.....	.....	.....	10	10	10	4.2	.....	23.9	23.9	.....	32.21	.....	1.35
Hand and finger	.....	.....	4	32	36	36	15.1	525.0	32.6	87.3	.....	423.42	.....	4.85
Leg, including ankle	.....	.....	.....	53	53	53	22.3	.....	25.2	25.2	.....	179.91	.....	7.14
Foot and toe	.....	.....	.....	20	20	20	8.4	.....	24.1	24.1	.....	64.95	.....	2.70
Multiple	2	.....	.....	22	22	24	10.1	.....	50.0	545.9	1,617.12	148.37	.27	2.96
Not stated	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Total	3	.....	4	231	235	238	.....	525.0	28.9	112.5	2,425.69	1,182.52	.40	31.67
Grand total	56	2	46	3,282	3,330	3,386	.....	988.1	25.6	141.0	6,690.61	2,817.82	1.12	66.31

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For underground injuries, 100 percent represents a total of 2,598 injuries; for surface, 100 percent represents a total of 470 injuries; and for strip mines, 100 percent represents a total of 238 injuries for which part of body was stated.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

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TABLE 28.—*Number of injuries, average severity, and injury rates at bituminous-coal mines (underground and surface works) in the United States, by percentage groups of coal loaded mechanically and part of body injured, 1955*

General location and part of body injured	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading:														
Head	15			50	50	65	5.1		22.3	1,401.8	3,034.31	37.66	0.51	1.69
Eye			2	65	67	67	5.3	1,800.0	7.4	60.9		137.66		2.26
Trunk	15	1		313	314	329	26.0		40.4	330.2	3,034.31	628.17	.51	10.59
Hernia				13	13	13	1.0		51.7	51.7		22.66		.44
Arm, including wrist	1			60	60	61	4.8		31.2	129.0	202.29	63.11	.03	2.02
Hand and finger			33	247	280	280	22.2	254.5	23.2	50.5		476.76		9.44
Leg, including ankle			1	220	221	221	17.5	4,500.0	42.5	62.6		466.58		7.45
Foot and toe			4	131	135	135	10.7	206.3	36.7	41.7		189.75		4.55
Multiple	26		1	66	67	93	7.4	4,800.0	60.8	1,772.2	5,259.47	297.09	.88	2.26
Not stated				86	86	86			38.2	38.2		110.65		2.90
Total	57	1	41	1,251	1,293	1,350		539.6	35.1	306.7	11,530.38	2,430.08	1.92	43.59
1 to 19 percent:														
Head	1			9	9	10	5.1		12.6	611.3	2,847.04	53.62	.47	4.27
Eye				15	15	15	7.7		15.1	15.1		107.71		7.12
Trunk				46	46	46	23.5		24.9	24.9		543.31		21.83
Hernia				2	2	2	1.0		35.5	35.5		33.69		.95
Arm, including wrist				7	7	7	3.6		64.9	64.9		215.43		3.32
Hand and finger			2	51	53	53	27.0	187.5	20.1	26.4		663.36		25.15
Leg, including ankle				37	37	37	18.9		33.1	33.1		581.75		17.56
Foot and toe				14	14	14	7.1		33.3	33.3		221.12		6.64
Multiple	2			10	10	12	6.1		69.9	1,058.3	5,694.08	331.68	.95	4.75
Not stated				1	1	1			22.0	22.0		10.44		.47
Total	3		2	192	194	197		187.5	28.4	120.9	8,541.12	2,762.10	1.42	92.05
20 to 39 percent:														
Head				6	6	6	2.2		25.0	25.0		41.57		1.66
Eye				16	16	16	5.8		13.5	13.5		59.86		4.43
Trunk	3			94	94	97	35.1		22.3	207.2	4,988.18	580.29	.83	26.05
Hernia				4	4	4	1.4		44.3	44.3		49.05		1.11
Arm, including wrist				14	14	14	5.1		12.6	12.6		48.77		3.88
Hand and finger			3	47	50	50	18.1	175.0	24.9	33.9		470.00		13.86
Leg, including ankle				42	42	42	15.2		45.2	45.2		526.25		11.64
Foot and toe				30	30	30	10.9		31.4	31.4		261.32		8.31
Multiple	2	1		14	15	17	6.2		65.1	1,112.4	3,325.45	1,915.18	.55	4.16
Not stated														
Total	5	1	3	267	271	276		175.0	29.0	160.4	8,313.63	3,952.30	1.39	75.10
40 to 59 percent:														
Head	1			5	5	6	4.3		8.6	1,007.2	2,083.89	14.93	.35	1.74
Eye				11	11	11	7.9		8.4	8.4		31.95		3.82
Trunk				32	32	32	23.0		40.4	40.4		448.73		11.11
Hernia														
Arm, including wrist				6	6	6	4.3		24.7	24.7		51.40		2.08
Hand and finger			3	28	31	31	22.3	567.3	25.2	77.6		835.99		10.77
Leg, including ankle			1	27	28	28	20.1	2,250.0	47.8	126.4		1,229.49		9.72
Foot and toe			1	16	17	17	12.2	1,440.0	34.4	117.1		691.16		5.90
Multiple	3			5	5	8	5.8		64.2	2,290.1	6,251.66	111.49	1.04	1.74
Not stated														
Total	4		5	130	135	139		1,078.4	34.2	243.4	8,335.55	3,415.14	1.39	46.89
60 to 79 percent:														
Head				9	9	9	3.3		24.6	24.6		43.39		1.77
Eye				18	18	18	6.7		12.6	12.6		44.37		3.53
Trunk	2			68	68	70	25.9		52.5	222.5	2,356.16	701.35	.39	13.35
Hernia				2	2	2	.7		52.0	52.0		20.42		.39
Arm, including wrist				12	12	12	4.4		46.2	46.2		108.78		2.36
Hand and finger			7	62	69	69	25.6	214.3	27.4	46.3		627.52		13.55
Leg, including ankle			1	39	40	40	14.8	3,000.0	35.5	109.7		861.18		7.85
Foot and toe			1	25	26	26	9.6	150.0	38.2	42.5		217.16		5.11
Multiple	6			18	18	24	8.9		31.1	1,523.3	7,068.49	109.76	1.18	3.53
Not stated				7	7	7			46.7	46.7		64.21		1.37
Total	8		9	260	269	277		516.7	36.9	224.7	9,424.65	2,798.14	1.57	52.82

See footnotes at end of table.

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TABLE 28.—*Number of injuries, average severity, and injury rates at bituminous-coal mines (underground and surface works) in the United States, by percentage groups of coal loaded mechanically and part of body injured, 1955*—Continued

General location and part of body injured	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
80 to 99 percent:														
Head	1			35	35	36	4.9		22.6	188.7	395.24	52.17	.07	2.31
Eye				41	41	41	5.6		8.0	8.0		21.61		2.70
Trunk	1			171	171	172	23.6		38.8	73.5	395.24	437.33	.07	11.26
Hernia				3	3	3	.4		62.0	62.0		12.25		.20
Arm, including wrist				25	25	25	3.4		27.6	27.6		45.39		1.65
Hand and finger			16	162	178	178	24.5	460.9	28.0	66.9		784.16		11.73
Leg, including ankle			1	128	129	129	17.7	4,500.0	38.9	73.5		624.68		8.50
Foot and toe			2	79	81	81	11.1	375.0	43.7	51.9		276.67		5.34
Multiple	7			56	56	63	8.7		36.1	698.7	2,766.69	133.06	.46	3.69
Not stated	1			2	2	3			141.0	2,094.0	395.24	18.58	.07	.13
Total	10		19	702	721	731		664.5	34.0	132.0	3,952.42	2,405.90	.66	47.49
100 percent:														
Head	40			486	486	526	5.9		24.0	478.4	1,249.20	60.61	.21	2.53
Eye			5	619	624	624	7.0	1,800.0	9.2	23.6		76.51		3.25
Trunk	54	3	4	2,202	2,209	2,263	25.5	500.0	36.2	187.3	1,686.43	519.47	.28	11.50
Hernia				136	136	136	1.5		54.8	54.8		38.78		.71
Arm, including wrist			8	377	385	385	4.3	3,735.0	37.5	114.4		229.20		2.00
Hand and finger			190	1,403	1,593	1,593	18.0	318.2	23.6	58.7		486.85		8.29
Leg, including ankle	1	2	16	1,474	1,492	1,493	16.9	2,836.9	46.7	88.5	31.23	656.87	.01	7.77
Foot and toe		1	35	1,072	1,108	1,108	12.5	855.4	32.9	64.2		370.48		5.77
Multiple	72	3	3	650	656	728	8.2	450.0	42.3	657.7	2,248.57	243.79	.37	3.41
Not stated	2			66	66	68			38.4	213.8	62.46	13.20	.01	.34
Total	169	9	261	8,485	8,755	8,924		682.0	33.7	171.7	5,277.89	2,695.76	.88	45.57
Not stated:														
Head	12			114	114	126	4.9		15.7	585.6	989.91	24.56	.16	1.57
Eye			2	160	162	162	6.3	1,800.0	12.3	34.3		76.44		2.23
Trunk	16	4	3	702	709	725	28.2	900.0	39.6	207.5	1,319.88	748.83	.22	9.75
Hernia				16	16	16	.6		56.8	56.8		12.50		.22
Arm including wrist			1	137	138	138	5.4	4,500.0	34.2	66.5		126.21		1.90
Hand and finger			62	409	471	471	18.3	340.3	23.6	65.3		422.76		6.48
Leg, including ankle			2	428	430	430	16.8	1,800.0	41.2	49.4		292.17		5.91
Foot and toe			6	280	286	286	11.1	337.5	31.7	38.1		149.83		3.93
Multiple	45	1		167	168	213	8.3		43.4	1,329.8	3,712.16	182.23	.62	2.31
Not stated	3			774	774	777			35.7	58.7	247.48	379.67	.04	10.64
Total	76	5	76	3,187	3,268	3,344		493.7	33.9	188.9	6,269.43	2,415.20	1.04	44.93
Surface [5]	3		3	57	60	63		650.0	29.7	343.6	3,319.93	672.10	.55	11.07
Grand total	335	16	419	14,531	14,966	15,301		628.1	33.8	186.9	6,113.00	2,585.08	1.02	45.52

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For all hand-loading injuries, 100 percent represents a total of 1,264 injuries; for 1 to 19 percent mechanical-loading injuries, 100 percent represents a total of 196 injuries; for 20 to 39 percent mechanical-loading injuries, 100 percent represents a total of 276 injuries; for 40 to 59 percent mechanical-loading injuries, 100 percent represents a total of 139 injuries; for 60 to 79 percent mechanical-loading injuries, 100 percent represents a total of 270 injuries; for 80 to 99 percent mechanical-loading injuries, 100 percent represents a total of 728 injuries; for 100 percent mechanical-loading injuries, 100 percent represents a total of 8,856 injuries; and for the group not stating the percentage of mechanization, 100 percent represents a total of 2,567 injuries.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Data on 61 surface installations (preparation plants and general repair shops) could not be assigned to any single underground mine.

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TABLE 29.—*Number of injuries, average severity, and injury rates at bituminous-coal mines (underground and surface works) in the United States, by percentage groups of coal loaded mechanically and part of body injured, 1956*

General location and part of body injured	Number of injuries						Distribution of all injuries percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading:														
Head	7			36	36	43	4.3		33.0	1,004.4	1,345.06	38.05	0.22	1.15
Eye			2	41	43	43	4.3	1,710.0	13.9	92.8		127.78		1.38
Trunk	14	2		280	282	296	29.5		35.2	357.7	2,690.13	700.27	.45	9.03
Hernia				16	16	16	1.6		76.6	76.6		39.26		.51
Arm, including wrist				68	68	68	6.8		39.7	39.7		86.40		2.18
Hand and finger			31	187	218	218	21.7	260.9	27.2	60.4		422.03		6.98
Leg, including ankle				152	152	152	15.1		34.7	34.7		168.90		4.87
Foot and toe			1	102	103	103	10.3	150.0	29.1	30.3		99.82		3.30
Multiple	20			45	45	65	6.5		66.4	1,892.1	3,843.04	95.63	.64	1.44
Not stated	4			193	193	197			34.9	156.1	768.61	215.95	.13	6.18
Total	45	2	34	1,120	1,156	1,201		342.9	34.5	276.7	8,646.83	1,994.09	1.44	37.02
1 to 19 percent:														
Head				5	5	5	3.0		23.0	23.0		59.50		2.59
Eye				12	12	12	7.2		5.7	5.7		35.18		6.21
Trunk				38	38	38	22.9		35.9	35.9		706.27		19.66
Hernia				2	2	2	1.2		84.5	84.5		87.44		1.03
Arm, including wrist				9	9	9	5.4		18.3	18.3		85.37		4.66
Hand and finger			4	38	42	42	25.3	112.5	18.4	27.4		594.51		21.73
Leg, including ankle				31	31	31	18.7		41.5	41.5		665.39		16.04
Foot and toe				9	9	9	5.4		24.9	24.9		115.90		4.66
Multiple	1			17	17	18	10.8		34.3	365.7	3,104.48	301.65	.52	8.80
Not stated														
Total	1		4	161	165	166		112.5	29.0	67.0	3,104.48	2,651.23	.52	85.37
20 to 39 percent:														
Head				10	10	10	5.2		7.0	7.0		25.95		3.71
Eye				8	8	8	4.1		11.6	11.6		34.48		2.97
Trunk				43	43	43	22.2		28.6	28.6		455.28		15.94
Hernia				1	1	1	.5		66.0	66.0		24.47		.37
Arm, including wrist				11	11	11	5.7		22.7	22.7		92.69		4.08
Hand and finger			3	50	53	53	27.3	550.0	23.0	52.8		1,037.73		19.65
Leg, including ankle				33	33	33	17.0		28.0	28.0		342.20		12.23
Foot and toe				18	18	18	9.3		32.9	32.9		219.86		6.67
Multiple	3			14	14	17	8.8		29.6	1,083.2	6,673.52	153.49	1.11	5.19
Not stated														
Total	3		3	188	191	194		550.0	25.5	126.0	6,673.52	2,386.15	1.11	70.81
40 to 59 percent:														
Head	2			15	15	17	7.8		10.7	715.4	3,981.80	53.42	.66	4.98
Eye				13	13	13	6.0		5.1	5.1		21.90		4.31
Trunk				65	65	65	29.8		28.2	28.2		607.89		21.57
Hernia				3	3	3	1.4		77.7	77.7		77.31		1.00
Arm, including wrist				11	11	11	5.0		31.6	31.6		115.47		3.65
Hand and finger			5	36	41	41	18.8	310.0	27.2	61.7		839.16		13.60
Leg, including ankle			1	26	27	27	12.4	3,000.0	49.6	158.9		1,423.49		8.96
Foot and toe				30	30	30	13.8		39.0	39.0		388.23		9.95
Multiple	3			8	8	11	5.0		29.0	1,657.5	5,972.70	76.98	1.00	2.65
Not stated				4	4	4			37.5	37.5		49.77		1.33
Total	5		6	211	217	222		758.3	30.6	184.7	9,954.49	3,653.63	1.66	72.00
60 to 79 percent:														
Head				14	14	14	5.3		24.9	24.9		81.75		3.28
Eye				14	14	14	5.3		11.2	11.2		36.78		3.28
Trunk	2			94	94	96	36.4		34.4	158.7	2,810.86	757.29	.47	22.02
Hernia	1			1	1	2	.8		91.0	3,045.5	1,405.43	21.32	.23	.23
Arm, including wrist				8	8	8	3.0		22.4	22.4		41.93		1.87
Hand and finger			5	51	56	56	21.2	480.0	19.7	60.8		797.58		13.12
Leg, including ankle				37	37	37	14.0		44.7	44.7		387.43		8.67
Foot and toe				21	21	21	8.0		31.8	31.8		156.24		4.92
Multiple	4			12	12	16	6.1		141.4	1,606.1	5,621.73	397.50	.94	2.81
Not stated														
Total	7		5	252	257	264		480.0	35.8	202.4	9,838.02	2,677.82	1.64	60.20

See footnotes at end of table.

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TABLE 29.—*Number of injuries, average severity, and injury rates at bituminous-coal mines (underground and surface works) in the United States, by percentage groups of coal loaded mechanically and part of body injured, 1956*—Continued

General location and part of body injured	Number of injuries						Distribution of all injuries percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
80 to 99 percent:														
Head	2			20	20	22	6.8		20.2	563.8	1,783.82	60.06	.30	2.97
Eye				24	24	24	7.5		94.2	94.2		335.95		3.57
Trunk				72	72	72	22.4		49.1	49.1		525.93		10.70
Hernia				2	2	2	.6		67.0	67.0		19.92		.30
Arm, including wrist			1	13	14	14	4.3	3,600.0	24.2	279.6		581.82		2.06
Hand and finger			8	80	88	88	27.3	243.8	25.2	45.1		589.40		13.08
Leg, including ankle			1	39	40	40	12.4	3,000.0	41.8	115.8		688.41		5.95
Foot and toe				34	34	34	10.6		40.4	40.4		204.10		5.05
Multiple	2			24	24	26	8.1		42.8	501.1	1,783.82	152.81	.30	3.57
Not stated														
Total	4		10	308	318	322		855.0	41.2	140.5	3,567.65	3,158.41	.59	47.27
100 percent:														
Head	45			487	487	532	5.8		22.0	527.6	1,350.24	53.52	.23	2.44
Eye	1		12	645	657	658	7.1	1,762.5	9.1	50.2	30.01	135.08	.01	3.29
Trunk	58	1	4	2,367	2,372	2,430	26.3	825.0	33.4	179.6	1,740.30	441.72	.29	11.86
Hernia				119	119	119	1.3		61.6	61.6		36.65		.80
Arm, including wrist			2	456	458	458	5.0	4,050.0	32.5	50.0		114.61		2.29
Hand and finger			167	1,504	1,671	1,671	18.1	386.2	22.5	58.9		491.92		8.36
Leg, including ankle	2	3	14	1,470	1,487	1,489	16.1	3,337.5	41.8	92.8	60.01	631.06	.01	7.44
Foot and toe		1	30	1,114	1,145	1,145	12.4	827.5	32.2	58.3		333.62		5.73
Multiple	73		3	656	659	732	7.9	803.7	38.0	635.7	2,190.38	136.70	.37	3.30
Not stated	8			47	47	55			27.8	896.5	240.04	6.53	.04	.24
Total	187	5	232	8,865	9,102	9,289		737.1	31.0	172.1	5,610.98	2,381.40	.94	45.52
Not stated:														
Head	29			170	170	199	5.3		26.7	897.2	2,239.28	58.52	.37	2.19
Eye		1	2	265	268	268	7.2	1,800.0	7.7	43.4		149.74		3.45
Trunk	25	3		945	948	973	26.1		33.0	204.7	1,930.41	633.36	32	12.20
Hernia				33	33	33	.9		55.6	55.6		23.62		.42
Arm, including wrist	1		1	176	177	178	4.8	3,600.0	28.9	82.5	77.22	111.77	.01	2.28
Hand and finger			83	719	802	802	21.6	399.9	22.9	61.9		638.93		10.32
Leg, including ankle	2			595	595	597	16.0		34.8	54.8	154.43	266.41	.03	7.66
Foot and toe			4	403	407	407	10.9	900.0	30.2	38.8		203.05		5.24
Multiple	52		1	211	212	264	7.1	300.0	44.6	1,218.6	4,015.26	125.03	.76	2.73
Not stated	4			216	216	220			34.1	142.5	308.87	94.69	.05	2.78
Total	113	4	91	3,733	3,828	3,941		486.7	29.7	217.5	8,725.46	2,305.11	1.45	49.26
Surface [5]			1	70	71	71		3,000.0	31.3	73.1		808.50		11.06
Grand total	365	11	386	14,908	15,305	15,670		641.3	31.2	189.4	6,557.76	2,329.71	1.09	45.83

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Numbers of injuries for which part of body injured was not stated are excluded in calculating percentages. For all hand-loading injuries, 100 percent represents a total of 1,004 injuries; for 1 to 19 percent mechanical-loading injuries, 100 percent represents a total of 166 injuries; for 20 to 39 percent mechanical-loading injuries, 100 percent represents a total of 194 injuries; for 40 to 59 percent mechanical-loading injuries, 100 percent represents a total of 218 injuries; for 60 to 79 percent mechanical-loading injuries, 100 percent represents a total of 264 injuries; for 80 to 99 percent mechanical-loading injuries, 100 percent represents a total of 322 injuries; for 100 percent mechanical-loading injuries, 100 percent represents a total of 9,234 injuries; and for the group not stating the percentage of mechanization, 100 percent represents a total of 3,721 injuries.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 30.—*Number of injuries, average severity, and injury rates at Pennsylvania anthracite mines (underground and surface works), by percentage groups of coal loaded mechanically and part of body injured, 1955*

General location and part of body injured	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading:														
Head				18	18	18	7.4		14.9	14.9		42.52		2.86
Eye				16	16	16	6.6		11.9	11.9		30.31		2.54
Trunk	2			56	56	58	23.8		24.7	230.8	1,904.09	219.76	0.32	8.89
Hernia				3	3	3	1.2		92.7	92.7		44.11		.48
Arm, including wrist				14	14	14	5.7		24.2	24.2		53.79		2.22
Hand and finger			2	35	37	37	15.2	300.0	24.4	39.3		230.55		5.87
Leg, including ankle				47	47	47	19.3		50.4	50.4		376.06		7.46
Foot and toe				16	16	16	6.6		18.4	18.4		46.65		2.54
Multiple	2			33	33	35	14.3		43.8	384.2	1,904.09	229.44	.32	5.24
Not stated														
Total	4		2	238	240	244		300.0	31.2	131.2	3,808.19	1,273.20	.63	38.08
1 to 19 percent:														
Head	2			19	19	21	6.0		15.3	585.3	2,229.22	54.06	.37	3.53
Eye				29	29	29	8.2		6.0	6.0		32.32		5.39
Trunk	2			88	88	90	25.6		28.8	161.4	2,229.22	469.99	.37	16.35
Hernia				13	13	13	3.7		75.7	75.7		182.80		2.41
Arm, including wrist				17	17	17	4.8		15.0	15.0		47.37		3.16
Hand and finger			4	54	58	58	16.5	281.3	28.6	46.0		495.44		10.77
Leg, including ankle				59	59	59	16.8		38.4	38.4		421.14		10.96
Foot and toe			1	37	38	38	10.8	150.0	18.6	22.1		155.86		7.06
Multiple	2			25	25	27	7.7		27.9	470.3	2,229.22	129.67	.37	4.64
Not stated				1	1	1			18.0	18.0		3.34		.19
Total	6		5	342	347	353		255.0	27.6	132.4	6,687.66	1,991.99	1.11	64.46
20 to 39 percent:														
Head														
Eye				2	2	2	15.4		7.5	7.5		53.76		7.17
Trunk				3	3	3	23.1		24.0	24.0		258.06		10.75
Hernia														
Arm, including wrist														
Hand and finger				3	3	3	23.1		18.3	18.3		197.13		10.75
Leg, including ankle				2	2	2	15.4		20.0	20.0		143.36		7.17
Foot and toe				2	2	2	15.4		35.0	35.0		250.89		7.17
Multiple				1	1	1	7.7		36.0	36.0		129.03		3.58
Not stated														
Total				13	13	13			22.2	22.2		1,032.22		46.59
40 to 59 percent:														
Head	1			19	19	20	8.4		14.9	314.2	2,706.20	127.64	.45	8.57
Eye				34	34	34	14.3		4.7	4.7		71.71		15.34
Trunk	1			47	47	48	20.2		23.9	148.4	2,706.20	506.06	.45	21.20
Hernia				2	2	2	.8		19.5	19.5		17.59		.90
Arm, including wrist				10	10	10	4.2		49.2	49.2		221.91		4.51
Hand and finger			1	39	40	40	16.8	150.0	28.0	31.0		559.78		18.04
Leg, including ankle	1		1	34	35	36	15.1	3,000.0	31.6	279.8	2,706.20	1,837.51	.45	15.79
Foot and toe				25	25	25	10.5		26.7	26.7		300.84		11.28
Multiple				23	23	23	9.7		32.1	32.1		332.86		10.37
Not stated														
Total	3		2	233	235	238		1,575.0	24.3	112.7	8,118.60	3,975.86	1.35	105.99
60 to 79 percent:														
Head	1			8	8	9	5.7		26.6	690.3	2,796.50	99.28	.47	8.73
Eye				11	11	11	7.0		8.8	8.8		45.21		5.13
Trunk	1			41	41	42	26.8		24.4	166.7	2,796.50	467.02	.47	19.11
Hernia														
Arm, including wrist				9	9	9	5.7		24.0	24.0		100.67		4.19
Hand and finger			4	31	35	35	22.3	187.5	36.1	53.4		871.11		16.31
Leg, including ankle				29	29	29	18.5		49.0	49.0		662.77		13.52
Foot and toe				11	11	11	7.0		36.2	36.2		185.50		5.13
Multiple	1			10	10	11	7.0		46.0	587.3	2,796.50	214.40	.47	4.66
Not stated														
Total	3		4	150	154	157		187.5	32.8	150.8	8,389.51	2,645.96	1.40	71.78

See footnotes at end of table.

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TABLE 30.—*Number of injuries, average severity, and injury rates at Pennsylvania anthracite mines (underground and surface works), by percentage groups of coal loaded mechanically and part of body injured, 1955* – Continued

General location and part of body injured	Number of injuries						Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal			All injuries	Distribution of all injuries, percent [1]	Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal								
		Total	Partial										
80 to 99 percent:													
Head	1			32	32	33	6.5		10.3	191.8	929.56	51.28	.15	4.96
Eye				54	54	54	10.7		6.7	6.7		56.08		8.37
Trunk	6			82	82	88	17.4		19.8	427.6	5,577.34	252.06	.93	12.70
Hernia				1	1	1	.2		83.0	83.0		12.86		.15
Arm, including wrist				22	22	22	4.3		22.6	22.6		77.00		3.41
Hand and finger			3	114	117	117	23.1	537.7	21.2	34.5		624.97		18.13
Leg, including ankle			1	110	111	111	21.9	3,000.0	28.0	54.8		942.42		17.20
Foot and toe			1	55	56	56	11.1	150.0	17.7	20.1		173.98		8.68
Multiple	2			22	22	24	4.7		46.1	542.3	1,859.11	157.25	.31	3.41
Not stated														
Total	9		5	492	497	506		952.6	21.1	136.7	8,366.02	2,347.91	1.39	77.00
100 percent:														
Head				3	3	3	5.2		2.0	2.0		10.68		5.34
Eye				11	11	11	19.0		4.5	4.5		89.02		19.58
Trunk	1			12	12	13	22.4		15.8	476.2	10,682.07	338.27	1.78	21.36
Hernia														
Arm, including wrist				4	4	4	6.9		13.8	13.8		97.92		7.12
Hand and finger				6	6	6	10.3		31.2	31.2		332.92		10.68
Leg, including ankle			1	9	10	10	17.2	3,000.0	14.6	313.1		5,574.26		17.80
Foot and toe			1	4	5	5	8.6	450.0	11.3	99.0		881.27		8.90
Multiple				6	6	6	10.3		19.3	19.3		206.52		10.68
Not stated														
Total	1		2	55	57	58		1,725.0	14.2	176.4	10,682.07	7,530.86	1.78	101.48
Not stated:														
Head	7			93	93	100	9.6		8.7	428.1	3,572.14	69.15	.60	7.91
Eye			2	149	151	151	14.6	1,800.0	4.6	28.4		364.95		12.84
Trunk	8			125	125	133	12.8		17.7	377.5	4,082.45	187.79	.68	10.63
Hernia				1	1	1	.1		93.0	93.0		7.91		.09
Arm, including wrist			1	57	58	58	5.6	300.0	16.8	21.7		106.91		4.93
Hand and finger			10	210	220	220	21.2	517.5	18.4	41.0		768.01		18.71
Leg, including ankle			2	147	149	149	14.4	3,000.0	32.0	71.9		910.73		12.67
Foot and toe			4	108	112	112	10.8	862.5	14.9	45.2		430.44		9.53
Multiple	11			102	102	113	10.9		17.1	599.5	5,613.36	148.58	.94	8.68
Not stated				34	34	34			30.4	30.4		87.77		2.89
Total	26		19	1,026	1,045	1,071		975.0	17.3	179.5	13,267.95	3,082.25	2.21	88.88
Surface [5]	4		1	144	145	149		900.0	18.5	185.0	5,919.88	878.36	.99	35.77
Grand total	56		40	2,693	2,733	2,789		835.3	22.0	153.7	8,581.26	2,367.84	1.43	69.80

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For all hand-loading injuries, 100 percent represents a total of 244 injuries; for 1 to 19 percent mechanical-loading injuries, 100 percent represents a total of 352 injuries; for 20 to 39 percent mechanical-loading injuries, 100 percent represents a total of 13 injuries; for 40 to 59 percent mechanical-loading injuries, 100 percent represents a total of 738 injuries; for 60 to 79 percent mechanical-loading injuries, 100 percent represents a total of 157 injuries; for 80 to 99 percent mechanical-loading injuries, 100 percent represents a total of 506 injuries; for 100 percent mechanical-loading injuries, 100 percent represents a total of 58 injuries; and for the group not stating the percentage of mechanization, 100 percent represents a total of 1,037 injuries.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 31.—*Number of injuries, average severity, and injury rates at Pennsylvania anthracite mines (underground and surface works), by percentage groups of coal loaded mechanically and part of body injured, 1956*

General location and part of body injured	Number of injuries						Distribution of all injuries percent [1]	Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading:														
Head	3			19	19	22	12.9		20.1	835.5	4,504.66	95.60	0.75	4.75
Eye				11	11	11	6.5		27.8	27.8		76.58		2.75
Trunk	2			50	50	52	30.6		26.3	256.1	3,003.11	320.09	.50	12.51
Hernia				3	3	3	1.8		66.7	66.7		50.05		.75
Arm, including wrist				6	6	6	3.5		32.0	32.0		48.05		1.50
Hand and finger				16	16	16	9.4		25.4	25.4		101.86		4.00
Leg, including ankle			1	23	24	24	14.1	4,500.0	45.7	231.3		1,389.19		6.01
Foot and toe				17	17	17	10.0		29.4	29.4		125.13		4.25
Multiple	1			18	18	19	11.2		28.1	342.4	1,501.55	126.38	.25	4.50
Not stated														
Total	6		1	163	164	170		4,500.0	29.8	266.8	9,009.32	2,341.92	1.50	41.04
1 to 19 percent:														
Head	2			18	18	20	6.8		7.2	606.5	3,963.14	42.93	.66	5.94
Eye				26	26	26	8.9		3.8	3.8		32.37		8.59
Trunk	2			67	67	69	23.5		19.9	193.2	3,963.14	440.24	.66	22.13
Hernia				6	6	6	2.0		106.0	106.0		210.05		1.98
Arm, including wrist				13	13	13	4.4		38.4	38.4		164.80		4.29
Hand and finger			2	47	49	49	16.7	112.5	20.5	24.2		392.02		16.18
Leg, including ankle				59	59	59	20.1		49.7	49.7		968.00		19.49
Foot and toe			1	17	18	18	6.1	150.0	28.4	35.1		208.73		5.94
Multiple	1			32	32	33	11.3		48.7	229.0	1,981.57	514.22	.33	10.57
Not stated				3	3	3			4.0	4.0		3.96		.99
Total	5		3	288	291	296		125.0	30.0	131.8	9,907.86	2,977.31	1.65	96.11
20 to 39 percent:														
Head				1	1	1	8.3		3.0	3.0		24.47		8.16
Eye														
Trunk														
Hernia														
Arm, including wrist				1	1	1	8.3		3.0	3.0		24.47		8.16
Hand and finger				4	4	4	33.3		11.8	11.8		383.38		32.63
Leg, including ankle				2	2	2	16.7		3.5	3.5		57.10		16.31
Foot and toe				2	2	2	16.7		20.0	20.0		326.28		16.31
Multiple				2	2	2	16.7		56.5	56.5		921.73		16.31
Not stated														
Total				12	12	12			17.8	17.8		1,737.43		97.88
40 to 59 percent:														
Head	1			18	18	19	9.3		5.6	321.1	3,564.29	60.00	.59	10.69
Eye				28	28	28	13.7		6.3	6.3		104.55		16.63
Trunk	2			38	38	40	19.6		10.4	309.9	7,128.58	234.65	1.19	22.57
Hernia				1	1	1	.5		78.0	78.0		46.34		.59
Arm, including wrist				14	14	14	6.9		7.8	7.8		64.75		8.32
Hand and finger			1	27	28	28	13.7	75.0	15.8	17.9		298.21		16.63
Leg, including ankle				29	29	29	14.2		42.3	42.3		729.49		17.23
Foot and toe				27	27	27	13.2		7.7	7.7		123.56		16.04
Mutiple				18	18	18	8.8		35.3	35.3		377.22		10.69
Not stated														
Total	3		1	200	201	204		75.0	16.8	105.1	10,692.87	2,038.77	1.78	119.40
60 to 79 percent:														
Head	1			13	13	14	8.0		22.3	449.3	2,517.15	121.66	.42	5.45
Eye				11	11	11	6.3		6.0	6.0		27.69		4.61
Trunk				38	38	38	21.7		22.0	22.0		351.14		15.94
Hernia				1	1	1	.6		75.0	75.0		31.46		.42
Arm, including wrist				11	11	11	6.3		14.5	14.5		66.70		4.61
Hand and finger			3	43	46	46	26.3	950.0	20.4	81.0		1,563.15		19.30
Leg, including ankle				30	30	30	17.1		65.7	65.7		826.46		12.59
Foot and toe				15	15	15	8.6		24.9	24.9		156.90		6.29
Multiple	1			8	8	9	5.1		89.5	746.2	2,517.15	300.38	.42	3.36
Not stated	1					1				6,000.0	2,517.15		.42	
Total	3		3	170	173	176		950.0	31.5	148.9	7,551.45	3,445.56	1.26	72.58

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TABLE 31.—*Number of injuries, average severity, and injury rates at Pennsylvania anthracite mines (underground and surface works), by percentage groups of coal loaded mechanically and part of body injured, 1956*—Continued

General location and part of body injured	Number of injuries						Average severity [2]			Time-loss rates [3] per million man-hours		Frequency rates [4] per million man-hours	
	Fatal	Nonfatal			All injuries	Distribution of all injuries, percent [1]	Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal								
		Total	Partial										
80 to 99 percent:													
Head				18	18	18	4.8		15.3	15.3		50.36		3.30
Eye				37	37	37	9.9		6.9	6.9		46.70		6.78
Trunk	1	1		63	64	65	17.3		31.4	215.7	1,098.73	1,461.31	.18	11.72
Hernia				6	6	6	1.6		55.5	55.5		60.98		1.10
Arm, including wrist				21	21	21	5.6		26.1	26.1		100.53		3.85
Hand and finger			2	68	70	70	18.7	450.0	27.5	39.6		507.61		12.82
Leg, including ankle			1	81	82	82	21.9	3,000.0	39.8	75.9		1,139.56		15.02
Foot and toe			1	45	46	46	12.3	3,000.0	28.3	92.9		782.66		8.42
Multiple	4		1	25	26	30	8.0	1,800.0	65.7	914.8	4,394.90	630.49		4.76
Not stated				1	1	1			1.0	1.0		.18	.73	.18
Total	5	1	5	365	371	376		1,740.0	31.2	149.2	5,493.63	4,780.37	.92	67.94
100 percent:														
Head	1			5	5	6	4.5		105.6	1,088.0	4,714.63	414.89	.79	3.93
Eye				11	11	11	8.3		3.4	3.4		29.07		8.64
Trunk	1			31	31	32	24.2		23.9	210.7	4,714.63	583.04	.79	24.36
Hernia				2	2	2	1.5		71.0	71.0		111.58		1.57
Arm, including wrist				5	5	5	3.8		22.8	22.8		89.58		3.93
Hand and finger			2	30	32	32	24.2	300.0	17.2	34.8		876.14		25.14
Leg, including ankle			1	17	18	18	13.6	3,000.0	30.9	195.8		2,769.85		14.14
Foot and toe				16	16	16	12.1		19.4	19.4		243.59		12.57
Multiple	2			8	8	10	7.6		31.6	1,225.3	9,429.27	198.80	1.57	6.29
Not stated														
Total	4		3	125	128	132		1,200.0	25.3	233.1	18,858.54	5,316.54	3.14	100.58
Not stated:														
Head	5			115	115	120	8.2		22.6	271.6	1,619.18	140.11	.27	6.21
Eye			2	163	165	165	11.3	1,800.0	7.6	29.3		260.85		8.91
Trunk	7	1	1	252	254	261	17.8	176.0	27.9	211.5	2,266.85	712.28	.38	13.71
Hernia				8	8	8	.5		64.1	64.1		27.69		.43
Arm, including wrist				92	92	92	6.3		23.3	23.3		115.45		4.97
Hand and finger			14	280	294	294	20.1	244.6	18.4	29.2		462.71		15.87
Leg, including ankle	1		3	182	185	186	12.7	3,500.0	30.7	118.7	323.84	868.09	.05	9.98
Foot and toe			3	180	183	183	12.5	300.0	23.4	28.0		276.34		9.88
Multiple	10		1	146	147	157	10.7	750.0	32.1	416.8	3,238.35	293.61	.54	7.93
Not stated				75	75	75			24.6	24.6		99.47		4.05
Total	23	1	24	1,493	1,518	1,541		806.3	23.4	128.7	7,448.21	3,256.60	1.24	81.93
Surface [5]	3		1	178	179	182		300.0	24.1	124.2	3,761.53	960.86	.63	37.41
Grand total	52	2	41	2,994	3,037	3,089		969.5	25.5	142.5	7,561.79	3,103.19	1.26	73.61

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which part of body injured was not stated are excluded in calculating percentages. For all hand-loading injuries, 100 percent represents a total of 170 injuries; for 1 to 19 percent mechanical-loading injuries, 100 percent represents a total of 293 injuries; for 20 to 39 percent mechanical-loading injuries, 100 percent represents a total of 12 injuries; for 40 to 59 percent mechanical-loading injuries, 100 percent represents a total of 204 injuries; for 60 to 79 percent mechanical-loading injuries, 100 percent represents a total of 175 injuries; for 80 to 99 percent mechanical-loading injuries, 100 percent represents a total of 375 injuries; for 100 percent mechanical-loading injuries, 100 percent represents a total of 132 injuries; and for the group not stating the percentage of mechanization, 100 percent represents a total of 1,466 injuries.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 32.—*Closed cases* [1] *of temporary total injuries for which company reported days of disability at bituminous-coal mines in the United States, by days of disability per injury and general location, 1955*

Days of disability per injury	Number of temporary total injuries						Days of disability per injury	Number of temporary total injuries					
	Underground mines			Strip mines	Auger mines	Total		Underground mines			Strip mines	Auger mines	Total
	Underground	Surface	Total					Underground	Surface	Total			
1	586	85	671	61	4	736	27	128	12	140	8	1	149
2	433	63	496	55	3	554	28	78	16	94	10	.....	104
3	568	90	658	53	6	717	29	59	8	67	3	.....	70
4	630	86	716	47	.....	763	30	102	15	117	3	.....	120
5	591	82	673	54	2	729	31	115	12	127	6	.....	133
6	541	70	611	34	.....	645	32	102	13	115	5	.....	120
7	313	41	354	29	.....	383	33	92	14	106	5	.....	111
8	193	34	227	26	1	254	34	80	10	90	2	.....	92
9	310	42	352	24	.....	376	35	90	3	93	6	.....	99
10	363	40	403	18	.....	421	36	36	4	40	4	.....	44
11	315	31	346	24	1	371	37	65	9	74	5	1	80
12	275	34	309	16	.....	325	38	65	8	73	10	1	84
13	330	38	368	25	.....	393	39	68	7	75	1	.....	76
14	185	21	206	18	.....	224	40	67	9	76	3	.....	79
15	119	20	139	7	.....	146	41	81	6	87	7	.....	94
16	187	22	209	6	.....	215	42	46	4	50	4	.....	54
17	172	22	194	11	.....	205	43	33	7	40	5	.....	45
18	212	16	228	11	1	240	44	56	3	59	2	.....	61
19	162	19	181	12	.....	193	45	56	2	58	2	.....	60
20	181	13	194	12	.....	206	46 to 60	730	90	820	44	1	865
21	123	17	140	8	1	149	61 to 90	786	83	869	45	.....	914
22	88	17	105	7	.....	112	91 to 120	361	33	394	20	.....	414
23	120	12	132	6	.....	138	121 to 150	185	15	200	8	.....	208
24	134	9	143	4	.....	147	151 or more	459	37	496	19	.....	515
25	129	12	141	7	.....	148							
26	126	17	143	4	.....	147	Total	11,326	1,373	12,699	806	23	13,528

[1] In addition to the temporary total injuries for which companies reported days of disability, there were 1,975 temporary total injuries for which days of disability were not reported. To obtain total severity data for the industry, these "open cases" were closed by assigning average days of disability by classification.

TABLE 33.—*Closed cases* [1] *of temporary total injuries for which company reported days of disability at bituminous-coal mines in the United States, by days of disability per injury and general location, 1956*

Days of disability per injury	Number of temporary total injuries						Days of disability per injury	Number of temporary total injuries					
	Underground mines			Strip mines	Auger mines	Total		Underground mines			Strip mines	Auger mines	Total
	Underground	Surface	Total					Underground	Surface	Total			
1	712	91	803	81	4	888	27	130	14	144	11	2	157
2	438	75	513	48	5	566	28	94	10	104	4	1	109
3	635	82	717	59	3	779	29	53	8	61	7	.....	68
4	617	73	690	58	3	751	30	94	9	103	8	.....	111
5	670	74	744	47	5	796	31	78	7	85	5	1	91
6	562	75	637	42	5	684	32	107	5	112	5	.....	117
7	322	35	357	31	2	390	33	87	9	96	3	.....	99
8	171	31	202	19	3	224	34	98	10	108	9	.....	117
9	338	46	384	27	4	415	35	64	10	74	4	1	79
10	304	56	360	32	3	395	36	38	6	44	4	.....	48
11	280	32	312	24	1	337	37	69	8	77	2	.....	79
12	334	35	369	22	1	392	38	52	6	58	4	.....	62
13	304	42	346	15	1	362	39	72	7	79	4	.....	83
14	191	26	217	15	1	233	40	62	5	67	3	.....	70
15	128	14	142	10	2	154	41	70	6	76	5	.....	81
16	206	20	226	11	1	238	42	56	7	63	7	1	71
17	168	20	188	13	.....	201	43	41	7	48	2	.....	50
18	176	27	203	11	1	215	44	60	9	69	5	.....	74
19	164	19	183	9	2	194	45	44	5	49	4	.....	53
20	175	24	199	13	1	213	46 to 60	586	71	657	43	3	703
21	105	17	122	7	2	131	61 to 90	619	71	690	46	1	737
22	82	4	86	9	.....	95	91 to 120	298	31	329	13	.....	342
23	106	14	120	6	.....	126	121 to 150	197	16	213	13	.....	226
24	119	22	141	8	1	150	151 or more	388	22	410	24	.....	434
25	122	21	143	4	.....	147							
26	106	8	114	11	.....	125	Total	10,992	1,342	12,334	867	61	13,262

[1] In addition to the temporary total injuries for which companies reported days of disability, there were 2,796 temporary total injuries for which days of disability were not reported. To obtain total severity data for the industry, these "open cases" were closed by assigning average days of disability by classification.

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TABLE 34.—*Closed cases* [1] *of temporary total injuries for which company reported days of disability at Pennsylvania anthracite mines, by days of disability per injury and general location, 1955*

Days of disability per injury	Number of temporary total injuries					Days of disability per injury	Number of temporary total injuries				
	Underground mines			Strip mines	Total		Underground mines			Strip mines	Total
	Underground	Surface	Total				Underground	Surface	Total		
1	112	33	145	11	156	27	20	4	24	2	26
2	142	22	164	8	172	28	12	1	13	1	14
3	176	38	214	8	222	29	11	1	12		12
4	167	32	199	10	209	30	10	1	11		11
5	157	23	180	6	186	31	13	1	14	2	16
6	118	26	144	14	158	32	14	3	17		17
7	60	5	65	3	68	33	21	3	24	2	26
8	36	3	39	1	40	34	11	4	15	1	16
9	55	6	61	2	63	35	8	1	9		9
10	70	8	78	4	82	36	3		3		3
11	67	5	72	3	75	37	11	3	14		14
12	63	13	76	6	82	38	12	1	13	2	15
13	40	5	45	2	47	39	12	4	16		16
14	31	7	38	6	44	40	11		11	1	12
15	17	1	18	2	20	41	10	1	11	1	12
16	18	5	23	1	24	42	12	1	13	1	14
17	30	4	34	3	37	43	2		2		2
18	38	5	43	4	47	44	2		2		2
19	36	4	40		40	45	10	2	12		12
20	32	3	35	2	37	46 to 60	92	17	109	4	113
21	5	2	7	5	12	61 to 90	89	12	101	6	107
22	10	5	15		15	91 to 120	48	11	59	2	61
23	18	1	19		19	121 to 150	21	1	22		22
24	22	3	25	2	27	151 or more	25	5	30	6	36
25	27	2	29	1	30						
26	25	1	26	1	27	Total	2,052	339	2,391	136	2,527

[1] In addition to the temporary total injuries for which companies reported days of disability, there were 344 temporary total injuries for which days of disability were not reported. To obtain total severity data for the industry, these "open cases" were closed by assigning average days of disability by classification.

TABLE 35.—*Closed cases* [1] *of temporary total injuries for which company reported days of disability at Pennsylvania anthracite mines, by days of disability per injury and general location, 1956*

Days of disability per injury	Number of temporary total injuries					Days of disability per injury	Number of temporary total injuries				
	Underground mines			Strip mines	Total		Underground mines			Strip mines	Total
	Underground	Surface	Total				Underground	Surface	Total		
1	152	39	191	16	207	27	17	3	20	2	22
2	168	46	214	17	231	28	14	4	18	1	19
3	197	25	222	15	237	29	8	1	9		9
4	243	27	270	15	285	30	10	4	14	3	17
5	177	33	210	15	225	31	10	1	11		11
6	166	24	190	6	196	32	16		16	2	18
7	55	7	62	5	67	33	17		17		17
8	28	11	39	3	42	34	20	2	22	1	23
9	63	11	74	6	80	35	11	1	12		12
10	87	10	97	5	102	36	4	5	9	1	10
11	73	11	84	7	91	37	9		9		9
12	59	6	65	6	71	38	10	2	12	2	14
13	52	9	61	1	62	39	17	4	21	3	24
14	30	13	43	4	47	40	7	3	10	1	11
15	20	7	27	5	32	41	9	1	10	1	11
16	38	4	42	2	44	42	5	1	6	1	7
17	35	7	42	2	44	43	5	1	6	2	8
18	37	3	40	4	44	44	12	2	14	1	15
19	36	4	40	1	41	45	17	1	18	2	20
20	35	7	42	1	43	46 to 60	97	21	118	17	135
21	16	2	18	2	20	61 to 90	107	17	124	12	136
22	15	4	19	2	21	91 to 120	46	16	62	10	72
23	20	1	21	3	24	121 to 150	25	7	32	2	34
24	25	5	30	1	31	151 or more	65	10	75	5	80
25	21	2	23	2	25						
26	16	2	18	2	20	Total	2,422	427	2,849	217	3,066

[1] In addition to the temporary total injuries for which companies reported days of disability, there were 216 temporary total injuries for which days of disability were not reported. To obtain total severity data for the industry, these "open cases" were closed by assigning average days of disability by classification.

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TABLE 36.—*Employment and production data on bituminous-coal mines (underground and surface works) in the United States, by percentage of coal loaded mechanically, 1955*

Coal loaded mechanically, percent	Number of mines	Men at work	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour
All hand loading	1, 757	21, 434	3, 772, 177	29, 660, 765	21, 827, 427	0. 74
1 to 19	17	1, 142	265, 531	2, 107, 451	1, 375, 132	. 65
20 to 39	30	2, 228	461, 035	3, 608, 534	2, 662, 682	. 74
40 to 59	33	1, 633	363, 805	2, 879, 234	2, 218, 191	. 77
60 to 79	41	2, 827	642, 064	5, 093, 028	4, 147, 049	. 81
80 to 99	63	8, 785	1, 911, 405	15, 180, 588	12, 727, 467	. 84
100	903	107, 860	24, 332, 871	192, 122, 248	234, 017, 698	1. 22
Not stated	4, 001	50, 301	9, 212, 310	72, 733, 886	64, 796, 123	. 89
Surface [1]	----------	3, 053	727, 260	5, 421, 806	----------	----------
Total	6, 845	199, 263	41, 688, 458	328, 807, 540	343, 771, 769	1. 05

[1] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 37.—*Employment and production data on bituminous-coal mines (underground and surface works) in the United States, by percentage of coal loaded mechanically, 1956*

Coal loaded mechanically, percent	Number of mines	Men at work	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour
All hand loading	2, 547	23, 787	3, 960, 522	31, 225, 306	22, 360, 244	0. 72
1 to 19	29	1, 062	245, 161	1, 932, 689	1, 342, 647	. 69
20 to 39	31	1, 706	343, 276	2, 697, 227	1, 926, 451	. 71
40 to 59	39	1, 794	381, 315	3, 013, 714	2, 485, 756	. 82
60 to 79	35	2, 374	538, 671	4, 269, 150	3, 934, 793	. 92
80 to 99	57	3, 925	848, 896	6, 727, 125	5, 256, 694	. 78
100	1, 005	112, 977	25, 172, 560	199, 965, 048	247, 813, 180	1. 24
Not stated	3, 550	48, 739	9, 802, 965	77, 703, 602	76, 720, 339	. 99
Surface [1]	----------	3, 660	869, 232	6, 421, 802	----------	----------
Total	7, 293	200, 024	42, 162, 598	333, 955, 663	361, 840, 104	1. 08

[1] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 38.—*Employment and production data on Pennsylvania anthracite mines (underground and surface works), by percentage of coal loaded mechanically, 1955*

Coal loaded mechanically, percent	Number of mines	Men at work	Man-days worked	Man-hours worked	Production, short tons	Ton per man-hour
All hand loading	1, 091	5, 445	896, 392	6, 302, 212	2, 994, 144	0. 48
1 to 19	20	5, 093	741, 519	5, 383, 051	2, 678, 754	. 50
20 to 39	4	238	36, 775	279, 009	147, 023	. 53
40 to 59	17	1, 533	299, 103	2, 217, 132	1, 070, 023	. 48
60 to 79	19	1, 277	278, 727	2, 145, 536	881, 205	. 41
80 to 99	40	4, 131	847, 567	6, 454, 685	2, 605, 789	. 40
100	30	382	81, 379	561, 689	425, 576	. 76
Not stated	115	8, 076	1, 585, 150	11, 757, 657	5, 038, 254	. 43
Surface [1]	----------	3, 251	556, 230	4, 054, 135	----------	----------
Total	1, 336	29, 426	5, 322, 842	39, 155, 106	15, 840, 768	. 40

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 39.—*Employment and production data on Pennsylvania anthracite mines (underground and surface works), by percentage of coal loaded mechanically, 1956*

Coal loaded mechanically, percent	Number of mines	Men at work	Man-days worked	Man-hours worked	Production, short tons	Ton per man-hour
All hand loading	447	2, 925	572, 959	3, 995, 862	2, 160, 666	0. 54
1 to 19	11	1, 740	422, 308	3, 027, 899	1, 833, 590	. 61
20 to 39	7	121	17, 665	122, 595	72, 564	. 59
40 to 59	11	945	221, 200	1, 683, 364	672, 566	. 40
60 to 79	25	1, 319	310, 703	2, 383, 649	1, 057, 916	. 44
80 to 99	44	3, 180	721, 997	5, 460, 869	2, 213, 767	. 41
100	52	881	181, 557	1, 272, 633	711, 104	. 56
Not stated	657	12, 442	2, 537, 506	18, 527, 937	8, 186, 188	. 44
Surface [1]	.....	2, 943	654, 839	4, 785, 282	.....	.....
Total	1, 254	26, 496	5, 640, 734	41, 260, 090	16, 908, 361	. 41

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 40.—*Injury experience at bituminous-coal mines (underground and surface works) in the United States, by percentage of coal loaded mechanically, 1955* [1]

Coal loaded mechanically, percent	Number of injuries						Distribution of all injuries, percent [2]	Average severity [3]			Time-loss rates [4] per million man-hours		Frequency rates [5] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading	57	1	41	1, 251	1, 293	1, 350	11. 4	539. 6	35. 1	306. 7	11, 530. 88	2, 430. 08	1. 92	43. 59
1 to 19	3	.....	2	192	194	197	1. 7	187. 5	28. 4	120. 9	8, 541. 12	2, 762. 10	1. 42	92. 05
20 to 39	5	1	3	267	271	276	2. 3	175. 0	29. 0	160. 4	8, 313. 63	3, 952. 30	1. 39	75. 10
40 to 59	4	.....	5	130	135	139	1. 2	1, 078. 4	34. 2	243. 4	8, 335. 55	3, 415. 14	1. 39	46. 89
60 to 79	8	.....	9	260	269	277	2. 3	516. 7	36. 9	224. 7	9, 424. 65	2, 796. 14	1. 57	52. 82
80 to 99	10	.....	19	702	721	731	6. 1	664. 5	34. 0	132. 0	3, 952. 42	2, 405. 90	. 66	47. 49
100	169	9	261	8, 485	8, 755	8, 924	75. 0	682. 0	33. 7	171. 7	5, 277. 89	2, 695. 76	. 88	45. 59
Not stated	76	5	76	3, 187	3, 268	3, 344	.....	493. 7	33. 9	188. 9	6, 269. 43	2, 415. 20	1. 04	44. 93
Surface [6]	3	.....	3	57	60	63	.....	650. 0	29. 8	343. 6	3, 319. 93	672. 47	. 55	11. 07
Total	335	16	419	14, 531	14, 966	15, 301	.....	628. 1	33. 8	186. 9	6, 113. 00	2, 585. 08	1. 02	45. 52

[1] Data include all injuries (underground and surface) at underground bituminous-coal mines.

[2] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which percent of mechanical loading was not stated are excluded in calculating percentages; 100 percent represents a total of 11,893 injuries

[3] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[4] Number of days charged per million man-hours.

[5] Number of injuries per million man-hours.

[6] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 41.—*Injury experience at bituminous-coal mines (underground and surface works) in the United States, by percentage of coal loaded mechanically, 1956* [1]

Coal loaded mechanically, percent	Number of injuries						Distribution of all injuries, percent [2]	Average severity [3]			Time-loss rates [4] per million man-hours		Frequency rates [5] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading	45	2	34	1,120	1,156	1,201	10.3	342.9	34.5	276.7	8,646.83	1,994.09	1.44	37.02
1 to 19	1	.....	4	161	165	166	1.4	112.5	29.0	67.0	3,104.48	2,651.23	.52	85.37
20 to 39	3	.....	3	188	191	194	1.7	550.0	25.5	126.0	6,673.52	2,386.15	1.11	70.81
40 to 59	5	.....	6	211	217	222	1.9	758.3	30.6	184.7	9,954.49	3,653.63	1.66	72.00
60 to 79	7	.....	5	252	257	264	2.3	480.0	35.8	202.4	9,838.02	2,677.82	1.64	60.20
80 to 99	4	.....	10	308	318	322	2.8	855.0	41.2	140.5	3,567.65	3,158.41	.59	47.27
100	187	5	232	8,865	9,102	9,289	79.7	737.1	31.0	172.1	5,610.98	2,381.40	.94	45.52
Not stated	113	4	91	3,733	3,828	3,941	.....	486.7	29.7	217.5	8,725.46	2,305.11	1.45	49.26
Surface [6]	.....	.....	1	70	71	71	.....	3,000.0	31.3	73.1	.....	808.50	.....	11.06
Total	365	11	386	14,908	15,305	15,670	.....	641.3	31.2	189.4	6,557.76	2,329.71	1.09	45.83

[1] Data include all injuries (underground and surface) at underground bituminous-coal mines.
[2] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which percent of mechanical loading was not stated are excluded in calculating percentages; 100 percent represents a total of 11,658 injuries.
[3] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.
[4] Number of days charged per million man-hours.
[5] Number of injuries per million man-hours.
[6] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 42.—*Injury experience at Pennsylvania anthracite mines (underground and surface works) by percentage of coal loaded mechanically, 1955* [1]

Coal loaded mechanically, percent	Number of injuries						Distribution of all injuries, percent [2]	Average severity [3]			Time-loss rates [4] per million man-hours		Frequency rates [5] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading	4	.....	2	238	240	244	15.6	300.0	31.2	131.2	3,808.19	1,273.20	0.63	38.08
1 to 19	6	.....	5	342	347	353	22.5	255.0	27.6	132.4	6,687.66	1,991.99	1.11	64.46
20 to 39	.....	.....	.....	13	13	13	.8	.....	22.2	222.2	.....	1,032.22	.....	46.59
40 to 59	3	.....	2	233	235	238	15.2	1,575.0	24.3	112.7	8,118.60	3,975.86	1.35	105.99
60 to 79	3	.....	4	150	154	157	10.0	187.5	32.8	150.8	8,389.51	2,645.96	1.40	71.78
80 to 99	9	.....	5	492	497	506	32.2	952.6	21.1	136.7	8,366.02	2,347.91	1.39	77.00
100	1	.....	2	55	57	58	3.7	1,725.0	14.2	176.4	10,682.07	7,530.86	1.78	101.48
Not stated	26	.....	19	1,026	1,045	1,071	.....	975.0	17.3	179.5	13,267.95	3,082.25	2.21	88.88
Surface [6]	4	.....	1	144	145	149	.....	900.0	18.5	185.0	5,919.88	878.36	.99	35.77
Total	56	.....	40	2,693	2,733	2,789	.....	835.3	22.0	153.7	8,581.26	2,367.84	1.43	69.80

[1] Data include all injuries (underground and surface) at underground anthracite mines.
[2] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which percent of mechanical loading was not stated are excluded in calculating percentages; 100 percent represents a total of 1,569 injuries.
[3] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.
[4] Number of days charged per million man-hours.
[5] Number of injuries per million man-hours.
[6] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 43. - *Injury experience at Pennsylvania anthracite mines (underground and surface works), by percentage of coal loaded mechanically, 1956* [1]

Coal loaded mechanically, percent	Number of injuries						Distribution of all injuries, percent [2]	Average severity [3]			Time-loss rates [4] per million man-hours		Frequency rates [5] per million man-hours	
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Fatal	Nonfatal	Fatal	Nonfatal
		Permanent		Temporary total	Total nonfatal									
		Total	Partial											
All hand loading	6		1	163	164	170	12.4	4,500.0	29.8	266.8	9,009.32	2,341.92	1.50	41.04
1 to 19	5		3	288	291	296	21.7	125.0	30.0	131.8	9,907.86	2,977.31	1.65	96.11
20 to 39				12	12	12	.9		17.8	17.8		1,737.43		97.88
40 to 59	3		1	200	201	204	14.9	75.0	16.8	105.1	10,692.87	2,038.77	1.78	119.40
60 to 79	3		3	170	173	176	12.9	950.0	31.5	148.9	7,551.45	3,445.56	1.26	72.58
80 to 99	5	1	5	365	371	376	27.5	1,740.0	31.2	149.2	5,493.63	4,780.37	.92	67.94
100	4		3	125	128	132	9.7	1,200.0	25.3	233.1	18,858.54	5,316.54	3.14	100.56
Not stated	23	1	24	1,493	1,518	1,541		806.3	23.4	128.7	7,448.21	3,256.60	1.24	81.93
Surface [6]	3		1	178	179	182		300.0	24.1	124.2	3,761.53	960.86	.63	37.41
Total	52	2	41	2,994	3,037	3,089		969.5	25.5	142.5	7,561.79	3,103.19	1.26	73.61

[1] Data include all injuries (underground and surface) at underground anthracite mines.

[2] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages. Number of injuries for which percent of mechanical loading was not stated are excluded in calculating percentages; 100 percent represents a total of 1,366 injuries.

[3] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[4] Number of days charged per million man-hours.

[5] Number of injuries per million man-hours.

[6] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 44.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by number of men employed, 1955*

Number of men employed	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Nonfatal	Per million man-hours		Per million tons								
			Fatal	Nonfatal	Fatal	Nonfatal							
Underground mines (includes surface works):													
1 to 4	24	165	3.75	25.78	5.45	37.46	6,277	131	823,252	6,399,907	4,404,468	0.69	2,316
5 to 9	26	533	1.91	39.16	2.36	48.33	11,946	145	1,727,457	13,612,454	11,027,731	.81	2,233
10 to 14	10	478	.98	46.95	1.26	60.23	7,982	161	1,288,952	10,181,868	7,935,903	.78	692
15 to 19	8	278	1.29	44.66	1.76	61.31	4,772	165	788,463	6,225,145	4,534,293	.73	286
20 to 24	9	241	1.59	42.58	1.96	52.58	4,129	173	713,137	5,659,425	4,583,899	.81	191
25 to 49	15	1,051	.74	51.62	.84	59.05	13,450	193	2,589,146	20,362,297	17,797,477	.87	394
50 to 74	23	757	1.75	57.68	1.73	56.79	8,786	188	1,654,886	13,125,181	13,329,868	1.02	145
75 to 99	32	874	2.28	62.35	2.25	61.47	8,828	201	1,775,195	14,018,222	14,217,490	1.01	104
100 to 124	18	1,111	1.10	67.91	.94	57.79	9,505	218	2,069,152	16,358,847	19,226,116	1.18	85
125 to 149	13	1,133	.86	74.68	.78	68.12	9,032	212	1,919,097	15,170,473	16,633,330	1.10	66
150 to 174	10	647	.96	61.85	.77	49.59	5,990	221	1,325,134	10,460,907	13,047,836	1.25	37
175 to 199	17	597	1.21	42.46	1.18	41.47	8,281	216	1,786,685	14,061,651	14,395,299	1.02	45
200 to 249	17	1,562	.67	61.66	.59	53.98	14,162	226	3,203,448	25,331,107	28,935,386	1.14	64
250 to 299	17	757	1.02	45.22	.90	40.09	9,426	226	2,132,328	16,739,454	18,880,282	1.13	34
300 to 399	30	2,082	.65	45.39	.54	37.51	25,535	228	5,834,747	45,869,197	55,511,500	1.21	75
400 to 499	15	564	.77	28.79	.68	25.58	10,687	232	2,476,287	19,587,257	22,044,273	1.13	25
500 to 599	18	694	.80	30.97	.76	29.43	12,190	232	2,826,295	22,408,371	23,582,821	1.05	22
600 or more	30	1,382	.63	28.90	.56	25.74	25,232	239	6,027,537	47,813,971	53,683,797	1.12	31
Surface [1]	3	60	.55	11.07			3,053	238	727,260	5,421,806			
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845
Strip mines:													
1 to 4	3	36	1.59	19.05	.82	9.87	1,633	143	234,162	1,889,327	3,648,243	1.93	641
5 to 9	4	59	1.04	15.29	.50	7.35	2,681	175	469,983	3,857,994	8,022,324	2.08	405
10 to 14	2	83	.56	23.15	.23	9.64	2,325	189	439,753	3,585,653	8,607,326	2.40	202
15 to 19		83		27.25		12.35	1,886	201	379,372	3,045,893	6,720,506	2.21	112
20 to 24	2	64	.71	22.73	.32	10.27	1,588	222	351,972	2,815,327	6,231,207	2.21	73
25 to 49	6	234	.55	21.51	.24	9.29	5,962	226	1,348,267	10,876,496	25,185,834	2.32	180
50 to 74	1	119	.22	26.30	.07	7.78	2,556	224	571,510	4,525,387	15,297,089	3.38	43
75 to 99	2	83	.53	21.86	.16	6.82	1,861	265	493,355	3,796,310	12,175,809	3.21	22
100 to 149	2	134	.40	27.11	.13	8.75	2,655	247	655,211	4,943,475	15,319,137	3.10	23
150 or more		73		19.53		5.27	2,003	247	493,804	3,738,367	13,847,714	3.70	10
Total	22	968	.51	22.47	.19	8.41	25,150	216	5,437,389	43,074,229	115,055,189	2.67	1,711

See footnote at end of table.

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TABLE 44.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by number of men employed, 1955*—Continued

Number of men employed	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Auger mines:													
1 to 4	1	3	6.04	18.12	2.53	7.58	140	147	20,623	165,533	395,804	2.39	51
5 to 9	1	8	5.19	41.55	2.01	16.12	183	133	24,281	192,548	496,300	2.58	30
10 to 14	.....	2	.....	13.22	.....	3.54	137	139	19,014	151,314	564,321	3.73	12
15 to 19	.....	9	.....	19.79	.....	10.64	210	239	50,104	454,691	845,857	1.86	13
20 to 24	.....	4	.....	28.24	.....	8.66	147	121	17,802	141,653	461,916	3.26	7
25 or more	1	6	2.52	15.14	1.08	6.46	309	157	48,523	396,345	928,225	2.34	7
Total	3	32	2.00	21.30	.81	8.67	1,126	160	180,347	1,502,084	3,692,423	2.46	120

[1] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 45.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by number of men employed, 1956*

Number of men employed	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1 to 4	26	237	2.46	22.42	3.10	28.29	8,758	154	1,346,203	10,572,435	8,376,974	0.79	3,237
5 to 9	33	528	2.12	33.91	2.51	40.16	12,155	163	1,978,313	15,572,277	13,147,164	.84	1,860
10 to 14	12	426	1.12	39.75	1.39	49.46	7,865	173	1,357,968	10,716,573	8,612,728	.80	678
15 to 19	8	281	1.25	43.93	1.57	55.30	4,732	171	808,104	6,396,837	5,081,206	.79	282
20 to 24	7	220	1.24	39.10	1.43	45.10	3,825	184	703,157	5,627,283	4,878,448	.87	178
25 to 49	26	1,075	1.32	54.76	1.38	57.10	12,990	192	2,488,848	19,632,436	18,826,388	.96	364
50 to 74	18	937	1.30	67.88	1.34	69.70	8,772	198	1,740,772	13,802,936	13,443,819	.97	145
75 to 99	16	661	1.40	58.00	1.21	50.15	6,809	212	1,445,411	11,397,061	13,181,406	1.16	79
100 to 124	8	832	.61	63.79	.55	57.12	7,887	209	1,650,539	13,043,500	14,566,264	1.12	71
125 to 149	12	736	1.01	61.93	.83	50.73	7,310	205	1,500,290	11,883,816	14,508,829	1.22	54
150 to 174	14	994	.99	70.64	.88	62.18	7,745	230	1,784,883	14,071,012	15,985,467	1.14	48
175 to 199	20	881	1.57	69.11	1.50	66.21	7,541	214	1,610,703	12,747,221	13,306,820	1.04	40
200 to 249	26	1,237	1.15	54.55	.90	42.79	12,656	227	2,869,108	22,674,631	28,906,991	1.27	56
250 to 299	24	1,008	.97	40.60	.89	37.18	13,406	227	3,036,474	24,827,651	27,112,818	1.09	48
300 to 399	41	2,456	.96	57.42	.79	47.58	23,696	229	5,417,363	42,775,883	51,620,933	1.21	68
400 to 499	14	1,018	.54	39.59	.43	31.57	13,982	233	3,254,267	25,712,670	32,243,177	1.25	32
500 to 599	13	480	.67	24.91	.59	21.83	10,578	229	2,420,978	19,271,514	21,985,921	1.14	19
600 or more	47	1,227	1.00	26.21	.84	21.89	25,657	229	5,879,985	46,808,125	56,054,751	1.20	34
Surface [1]	.....	71	.....	11.06	.....	.....	3,660	237	869,232	6,421,802	.....	.....	.....
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,663	361,840,104	1.08	7,293
Strip mines:													
1 to 4	2	39	1.06	20.70	.51	9.90	1,577	149	234,375	1,884,449	3,941,031	2.09	651
5 to 9	2	72	.50	17.86	.22	7.80	2,630	193	507,113	4,030,246	9,232,365	2.29	404
10 to 14	3	103	.73	25.12	.30	10.27	2,364	211	499,573	4,099,682	10,025,554	2.45	201
15 to 19	1	65	.30	19.18	.13	8.51	1,957	213	416,846	3,389,013	7,633,689	2.25	118
20 to 24	1	92	.35	31.84	.15	13.75	1,664	217	360,716	2,889,239	6,692,327	2.32	77
25 to 49	5	240	.42	20.05	.18	8.45	6,344	232	1,472,817	11,969,535	28,388,189	2.37	187
50 to 74	2	120	.39	23.66	.12	7.34	2,627	248	652,708	5,071,573	16,346,927	3.22	44
75 to 99	1	133	.18	23.90	.06	7.36	2,739	265	724,888	5,565,687	18,070,811	3.25	31
100 to 124	1	80	.38	30.51	.14	11.07	1,333	254	338,101	2,621,822	7,223,874	2.76	12
125 to 149	2	87	.87	37.83	.22	9.72	1,121	269	301,909	2,299,557	8,954,477	3.89	8
150 to 199	.....	22	.....	21.60	.....	6.01	518	261	134,951	1,018,401	3,660,177	3.59	3
200 or more	5	30	2.55	15.29	.78	4.69	1,055	246	259,105	1,961,686	6,397,762	3.26	4
Total	25	1,083	.53	23.14	.20	8.56	25,929	228	5,903,102	46,800,890	126,567,183	2.70	1,740
Auger mines:													
1 to 4	2	12	6.79	40.76	2.14	12.83	255	146	37,321	294,393	935,303	3.18	101
5 to 9	.....	18	.....	40.42	.....	12.16	312	174	54,378	445,350	1,479,666	3.32	48
10 to 14	.....	23	.....	32.93	.....	10.53	383	212	81,013	698,431	2,183,588	3.13	33
15 to 19	.....	7	.....	27.11	.....	7.73	183	176	32,253	258,170	905,201	3.51	11
20 to 24	.....	6	.....	58.44	.....	15.01	67	190	12,725	102,665	399,847	3.89	3
25 to 49	.....	22	.....	36.27	.....	15.79	426	170	72,341	606,628	1,393,670	2.30	14
50 or more	.....	10	.....	35.71	.....	19.01	199	183	36,419	280,027	525,980	1.88	3
Total	2	98	.74	36.49	.26	12.53	1,825	179	326,450	2,685,664	7,823,275	2.91	213

[1] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 46.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by number of men employed, 1955*

Number of men employed	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (excludes surface workers):													
1 to 4	8	49	2.10	12.84	5.43	33.26	3,571	152	541,931	3,817,424	1,473,401	0.39	1,094
5 to 9	1	33	1.74	57.49	2.99	98.57	441	185	81,601	574,047	334,772	.58	67
10 to 14	1	29	1.70	49.33	2.46	71.48	384	220	84,393	587,903	405,729	.69	34
15 to 19		14		36.87		68.25	262	204	53,560	379,725	205,128	.54	16
20 to 24		58		115.86		130.32	315	223	70,235	500,603	445,070	.89	14
25 to 49	4	261	1.58	103.28	3.18	207.75	1,836	190	348,404	2,527,058	1,256,322	.50	43
50 to 74	1	101	.96	99.91	2.01	202.81	695	214	148,784	1,042,169	498,010	.48	12
75 to 99		48		130.70		243.88	275	190	52,155	367,249	196,819	.54	3
100 to 149	1	87	.76	66.42	1.35	117.31	1,026	178	182,230	1,309,934	741,619	.57	10
150 to 199	7	161	3.66	84.23	9.85	226.61	1,202	213	256,083	1,911,504	710,475	.37	7
200 to 299	5	295	1.65	97.36	4.07	215.60	3,146	125	392,346	3,033,404	1,229,127	.41	12
300 to 399	6	363	1.18	71.69	2.27	137.42	3,468	195	677,208	5,063,624	2,641,619	.52	10
400 or more	18	1,119	1.29	80.01	3.16	196.22	9,554	197	1,877,692	13,986,327	5,702,677	.41	14
Surface [1]	4	145	.99	35.77			3,251	171	556,230	4,054,135			
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336
Strip mines:													
1 to 4	1	2	50.83	101.66	20.24	40.48	31	90	2,787	19,673	49,410	2.51	10
5 to 9	1	4	5.33	21.30	2.66	10.65	140	184	25,782	187,751	375,622	2.00	22
10 to 14		6		20.17		12.27	227	185	41,969	297,512	480,074	1.64	18
15 to 19		23		45.81		26.87	393	179	70,322	502,035	856,051	1.71	23
20 to 24		5		16.02		11.98	242	183	44,284	312,051	417,482	1.34	11
25 to 49		50		30.95		19.12	1,164	197	229,022	1,615,357	2,614,967	1.62	32
50 to 99	1	29	.76	22.15	.51	14.70	988	187	185,239	1,308,974	1,972,542	1.51	13
100 or more		53		27.25		20.93	1,342	205	274,774	1,944,918	2,532,489	1.30	8
Total	3	172	.48	27.79	.32	18.48	4,527	193	874,179	6,188,271	9,307,637	1.50	137
Washeries:													
1 to 4							4	97	388	2,716	8,539	3.14	2
5 to 9							42	168	7,060	49,425	1,258,413	25.46	6
10 to 14		5		72.40		29.57	61	155	9,439	69,057	169,073	2.45	5
15 to 19		4		50.65		5.61	68	167	11,338	78,968	713,068	9.03	4
20 or more	1	4	4.22	16.87	.96	3.83	316	107	33,761	237,111	1,044,737	4.41	8
Total	1	13	2.29	29.73	.31	4.07	491	126	61,986	437,277	3,193,830	7.30	25
Dredges:													
1 to 4							5	130	650	5,200	3,544	.68	3
5 to 9		1		29.87		19.91	22	190	4,185	33,480	50,233	1.50	3
10 or more							79	267	21,090	175,428	552,234	3.15	2
Total		1		4.67		1.65	106	245	25,925	214,108	606,011	2.83	8

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 47.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by number of men employed, 1956*

Number of men employed	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
			Per million man-hours		Per million tons								
	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1 to 4	9	120	2.97	39.56	6.78	90.41	2,865	152	435,899	3,033,670	1,327,337	0.44	922
5 to 9	1	45	.82	36.80	1.14	51.35	855	206	176,501	1,222,967	876,412	.72	139
10 to 14	1	39	.98	38.25	1.30	50.75	625	237	147,930	1,019,698	768,465	.75	53
15 to 19	5	75	5.54	83.16	8.84	132.62	534	242	129,243	901,923	565,534	.63	32
20 to 24		21		77.93		150.99	198	191	37,825	269,479	139,082	.52	9
25 to 49		189		99.61		152.81	1,232	219	270,303	1,897,442	1,236,810	.65	38
50 to 99	6	139	4.44	102.86	7.78	180.12	1,042	179	186,986	1,351,380	771,691	.57	16
100 to 149	3	175	1.87	109.32	3.64	212.34	1,081	207	224,057	1,600,761	824,140	.51	9
150 to 199	2	105	1.18	62.16	3.06	160.55	1,130	202	228,112	1,689,074	653,996	.39	7
200 to 299	5	392	1.22	95.64	2.91	228.41	2,503	222	554,936	4,098,686	1,716,221	.42	10
300 to 399	1	217	.34	74.24	.51	111.25	1,721	226	388,249	2,922,842	1,950,582	.67	5
400 or more	16	1,341	.97	81.44	2.63	220.63	9,767	226	2,205,854	16,466,886	6,078,091	.37	14
Surface [1]	3	179	.63	37.41			2,943	223	654,839	4,785,282			
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254
Strip mines:													
1 to 4		1		31.27		29.13	30	137	4,102	31,978	34,328	1.07	10
5 to 9		6		23.41		12.15	227	162	36,664	256,295	493,789	1.93	31
10 to 14		17		38.67		28.16	293	208	60,964	439,632	603,712	1.37	25
15 to 19		15		31.69		16.91	356	190	67,469	473,289	886,796	1.87	21
20 to 24		15		49.09		23.18	233	187	43,635	305,557	647,102	2.12	11
25 to 49	2	68	.90	30.71	.58	19.79	1,400	224	313,112	2,213,961	3,436,582	1.55	40
50 to 74	1	8	1.87	14.96	1.84	14.72	352	216	75,956	534,592	543,462	1.02	6
75 to 99		16		21.30		12.66	433	242	104,632	751,060	1,263,571	1.68	5
100 to 149		7		10.35		5.56	521	182	95,025	676,215	1,259,182	1.86	4
150 or more		82		47.18		48.23	995	247	245,470	1,738,000	1,700,067	.98	4
Total	3	235	.40	31.67	.28	21.62	4,840	216	1,047,029	7,420,579	10,868,591	1.46	157
Washeries:													
1 to 4		1		19.71		4.00	43	156	6,710	50,733	249,974	4.93	14
5 to 9	1	3	5.61	16.84	2.56	7.69	180	135	24,317	178,166	390,039	2.19	26
10 to 14		4		23.70		2.29	170	135	22,910	168,783	1,746,811	10.35	15
15 to 19		3		21.87		147.32	84	225	18,873	137,157	20,364	.15	5
20 to 24		6		50.29		19.47	87	190	16,513	119,300	308,123	2.58	4
25 to 49		14		41.23		16.74	237	204	48,451	339,524	836,245	2.46	7
50 or more		21		80.76		93.36	205	181	37,145	260,015	224,937	.87	3
Total	1	52	.80	41.48	.26	13.77	1,006	174	174,919	1,253,678	3,776,493	3.01	74
Dredges:													
1 to 4							40	140	5,608	81,376	57,133	.70	15
5 to 9		1		29.13		10.82	26	159	4,123	34,324	92,405	2.69	4
10 or more		5		29.48		9.74	99	212	21,007	169,579	513,254	3.03	4
Total		6		21.03		9.05	165	186	30,738	285,279	662,792	2.32	23

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 48.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by length of shift, 1955*

Length of shift, hours	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
5.5 to 6.4	.....	7	.....	19.62	.....	31.97	383	156	59,779	356,849	218,965	0.61	96
6.5 to 7.4	10	395	0.97	38.47	1.66	65.52	7,624	188	1,432,265	10,268,642	6,028,720	.59	542
7.5 to 8.4	325	14,504	1.03	45.78	.97	43.14	190,473	210	40,039,954	316,821,909	336,199,268	1.06	6,181
8.5 to 9.4	.....	56	.....	44.61	.....	46.66	688	208	143,207	1,255,217	1,200,107	.96	7
All other	.....	4	.....	38.12	.....	32.07	95	140	13,253	104,923	124,709	1.19	19
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845
Strip mines:													
5.5 to 6.4	.....	1	.....	38.80	.....	16.68	32	135	4,305	25,772	59,948	2.33	8
6.5 to 7.4	5	240	.53	25.54	.15	7.41	5,756	224	1,288,591	9,395,364	32,399,321	3.45	160
7.5 to 8.4	16	617	.56	21.50	.22	8.43	17,087	211	3,608,785	28,694,547	73,192,258	2.55	1,358
8.5 to 9.4	.....	80	.....	24.65	.....	12.79	1,455	253	367,706	3,245,287	6,253,629	1.93	124
All other	1	30	.58	17.51	.32	9.52	820	205	168,002	1,713,259	3,150,033	1.84	61
Total	22	968	.51	22.47	.19	8.41	25,150	216	5,437,389	43,074,229	115,055,189	2.67	1,711
Auger mines:													
6.5 to 7.4	2	4	7.48	14.97	2.89	5.77	192	192	36,772	267,216	693,179	2.59	9
7.5 to 8.4	1	19	1.31	24.89	.46	8.67	733	130	95,550	763,343	2,191,558	2.87	99
8.5 to 9.4	.....	.....	.....	.....	.....	.....	43	132	5,676	50,885	149,111	2.93	4
All other	.....	9	.....	21.40	.....	13.67	158	268	42,349	420,640	658,575	1.57	8
Total	3	32	2.00	21.30	.81	8.67	1,126	160	180,347	1,502,084	3,692,423	2.46	120

TABLE 49.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by length of shift, 1956*

Length of shift, hours	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
5.5 to 6.4	1	12	2.28	27.39	3.49	41.93	444	165	73,314	438,094	286,218	0.65	94
6.5 to 7.4	5	378	.46	34.90	.95	71.83	7,704	196	1,509,197	10,830,118	5,262,692	.49	545
7.5 to 8.4	358	14,774	1.12	46.42	1.02	42.10	189,418	212	40,084,826	318,280,011	350,948,637	1.10	6,614
8.5 to 9.4	1	140	.23	32.14	.19	26.39	2,392	203	486,706	4,356,416	5,305,270	1.22	19
All other	.....	1	.....	19.60	.....	26.82	66	130	8,555	51,024	37,287	.73	21
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,663	361,840,104	1.08	7,293
Strip mines:													
5.5 to 6.4	.....	1	.....	29.78	.....	11.35	52	108	5,594	33,574	88,091	2.62	12
6.5 to 7.4	2	214	.23	24.73	.07	7.25	5,127	233	1,193,854	8,651,985	29,514,431	3.41	140
7.5 to 8.4	21	726	.66	22.90	.25	8.64	17,890	224	4,009,087	31,707,495	84,040,960	2.65	1,390
8.5 to 9.4	1	105	.22	23.31	.11	11.34	2,028	248	502,799	4,504,494	9,256,964	2.06	130
All other	1	37	.53	19.44	.27	10.09	832	230	191,768	1,903,342	3,666,737	1.93	68
Total	25	1,083	.53	23.14	.20	8.56	25,929	228	5,903,102	46,800,890	126,567,183	2.70	1,740
Auger mines:													
6.5 to 7.4	2	23	6.11	70.22	2.26	25.99	201	224	45,114	327,524	884,805	2.70	16
7.5 to 8.4	.....	54	.....	31.01	.....	9.95	1,356	161	218,090	1,741,636	5,425,808	3.12	173
8.5 to 9.4	.....	5	.....	41.85	.....	7.16	82	163	13,401	119,476	698,248	5.84	11
All other	.....	16	.....	32.19	.....	19.65	196	268	49,845	497,028	814,414	1.64	13
Total	2	98	.74	36.49	.26	12.53	1,825	179	326,450	2,685,664	7,823,275	2.91	213

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TABLE 50.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by length of shift, 1955*

Length of shift, hours	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
5.5 to 6.4	-------	8	-------	50.91	-------	61.65	131	197	25,828	157,127	129,766	0.83	20
6.5 to 7.4	41	1,961	1.58	75.65	3.30	157.80	20,645	174	3,600,210	25,921,128	12,427,483	.48	1,268
7.5 to 8.4	10	619	1.11	68.65	3.05	188.73	5,387	212	1,139,390	9,016,976	3,279,842	.36	45
All other	1	-------	174.22	-------	271.96	-------	12	99	1,184	5,740	3,677	.64	3
Surface [1]	4	145	.99	35.77	-------	-------	3,251	171	556,230	4,054,135	-------	-------	-------
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336
Strip mines:													
6.5 to 7.4	3	171	.50	28.50	.34	19.11	4,436	192	850,751	6,000,659	8,947,963	1.49	131
7.5 to 8.4	-------	1	-------	5.68	-------	2.83	86	258	22,148	176,092	353,971	2.01	5
8.5 to 9.4	-------	-------	-------	-------	-------	-------	5	256	1,280	11,520	5,703	.50	1
Total	3	172	.48	27.79	.32	18.48	4,527	193	874,179	6,188,271	9,307,637	1.50	137

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 51.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by length of shift, 1956*

Length of shift, hours	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
5.5 to 6.4	-------	27	-------	47.30	-------	56.70	417	228	94,981	570,781	476,189	0.83	83
6.5 to 7.4	34	2,140	1.27	80.22	2.65	166.68	18,146	205	3,722,505	26,675,875	12,838,921	.48	1,083
7.5 to 8.4	14	684	1.55	75.55	3.93	191.84	4,878	235	1,145,039	9,053,385	3,565,400	.39	67
All other	1	7	5.72	40.05	35.91	251.34	112	209	23,370	174,767	27,851	.16	21
Surface [1]	3	179	.63	37.41	-------	-------	2,943	223	654,839	4,785,282	-------	-------	-------
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254
Strip mines:													
6.5 to 7.4	3	222	.42	31.09	.29	21.78	4,694	215	1,011,359	7,141,111	10,191,753	1.43	146
7.5 to 8.4	-------	12	-------	43.90	-------	17.88	143	245	35,058	273,348	671,133	2.46	10
All other	-------	1	-------	163.40	-------	175.28	3	204	612	6,120	5,705	.93	1
Total	3	235	.40	31.67	.28	21.62	4,840	216	1,047,029	7,420,579	10,868,591	1.46	157

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 52.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by number of shifts, 1955*

Number of shifts	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1	124	4,178	1.25	42.24	1.49	50.29	70,794	178	12,619,989	98,914,132	83,084,006	0.84	5,979
2	140	7,335	1.00	52.20	.87	45.45	79,945	222	17,782,520	140,510,808	161,387,578	1.15	667
3	70	3,400	.79	38.55	.71	34.63	47,720	233	11,136,345	88,193,015	98,168,060	1.11	175
Combination	1	53	.84	44.55	.88	46.81	804	186	149,604	1,189,585	1,132,125	.95	24
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845
Strip mines:													
1	14	612	.53	23.09	.20	8.67	16,355	205	3,345,831	26,505,448	70,596,950	2.66	1,403
2	3	174	.43	25.17	.19	11.11	3,673	229	839,911	6,911,830	15,657,246	2.27	186
3	5	123	.72	17.80	.26	6.35	3,723	237	883,072	6,909,886	19,384,651	2.81	100
Combination		59		21.48		6.27	1,399	263	368,575	2,747,065	9,416,342	3.43	22
Total	22	968	.51	22.47	.19	8.41	25,150	216	5,437,389	43,074,229	115,055,189	2.67	1,711
Auger mines:													
1	3	26	2.39	20.73	1.04	9.05	967	155	149,696	1,254,035	2,873,126	2.29	112
2		3		14.76		4.65	138	180	24,894	203,212	645,772	3.18	7
3		3		66.91		17.29	21	274	5,757	44,837	173,525	3.87	1
Total	3	32	2.00	21.30	.81	8.67	1,126	160	180,347	1,502,084	3,692,423	2.46	120

TABLE 53.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by number of shifts, 1956*

Number of shifts	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1	132	4,256	1.39	44.67	1.59	51.39	65,596	185	12,126,362	95,273,499	82,815,322	0.87	5,477
2	136	6,991	1.03	52.93	.88	45.09	75,105	222	16,695,824	132,070,369	155,056,725	1.17	661
3	90	3,779	.92	38.44	.77	32.18	53,264	231	12,291,191	98,296,350	117,445,219	1.19	204
Combination	7	279	.84	33.55	1.07	42.77	6,059	173	1,049,221	8,315,445	6,522,838	.78	951
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,663	361,840,104	1.08	7,293
Strip mines:													
1	16	745	.51	23.72	.19	8.72	17,816	222	3,958,748	31,414,061	85,403,484	2.72	1,410
2	2	171	.32	27.07	.13	11.02	3,281	235	772,632	6,317,078	15,510,459	2.46	162
3	5	103	.87	17.93	.34	7.10	2,977	246	732,672	5,744,618	14,506,202	2.53	77
Combination	2	64	.60	19.25	.18	5.74	1,855	237	439,050	3,325,133	11,147,038	3.35	91
Total	25	1,083	.53	23.14	.20	8.56	25,929	228	5,903,102	46,800,890	126,567,183	2.70	1,740
Auger mines:													
1	2	75	.88	32.96	.32	11.82	1,505	182	274,655	2,275,467	6,342,900	2.79	183
2		17		67.12		17.98	213	152	32,312	253,280	945,523	3.73	17
3		6		85.37		22.06	47	184	8,654	70,285	272,033	3.87	3
Combination							60	180	10,829	86,632	262,819	3.03	10
Total	2	98	.74	36.49	.26	12.53	1,825	179	326,450	2,685,664	7,823,275	2.91	213

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TABLE 54.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by number of shifts, 1955*

Number of shifts	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1	39	1,708	1.55	67.73	3.56	156.07	19,795	174	3,441,463	25,219,464	10,944,102	0.43	1,285
2	10	750	1.22	91.36	2.55	191.10	5,292	209	1,103,658	8,209,717	3,924,734	.48	43
3	3	130	1.79	77.76	3.09	133.75	1,088	204	221,491	1,671,790	971,932	.58	8
Surface [1]	4	145	.99	35.77	.....	.....	3,251	171	556,230	4,054,135	.....	.....	.....
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336
Strip mines:													
1	3	67	.91	20.27	.65	14.53	2,596	179	465,227	3,304,713	4,610,358	1.40	93
2	.....	29	.....	32.05	.....	17.27	645	196	127,886	904,823	1,679,243	1.86	23
3	.....	76	.....	38.41	.....	25.18	1,286	219	281,066	1,978,735	3,018,036	1.53	21
Total	3	172	.48	27.79	.32	18.48	4,527	193	874,179	6,188,271	9,307,637	1.50	137

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 55.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by number of shifts, 1956*

Number of shifts	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1	31	1,745	1.33	74.92	2.96	166.72	15,417	206	3,181,589	23,292,804	10,466,702	0.45	951
2	9	928	.90	93.30	1.94	200.25	5,783	234	1,354,361	9,946,482	4,634,243	.47	62
3	9	183	4.75	96.57	7.66	155.80	1,374	188	258,464	1,895,093	1,174,599	.62	12
Combination	.....	2	.....	1.49	.....	3.16	979	196	191,481	1,340,429	632,817	.47	229
Surface [1]	3	179	.63	37.41	.....	.....	2,943	223	654,839	4,785,282	.....	.....	.....
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254
Strip mines:													
1	2	67	.64	21.35	.40	13.42	2,133	206	438,762	3,137,961	4,991,003	1.59	76
2	.....	41	.....	30.07	.....	21.60	919	211	194,030	1,363,424	1,897,812	1.39	37
3	1	126	.39	49.00	.29	36.93	1,566	233	364,588	2,571,651	3,411,429	1.33	31
Combination	.....	1	.....	2.88	.....	1.76	222	224	49,649	347,543	568,347	1.64	13
Total	3	235	.40	31.67	.28	21.62	4,840	216	1,047,029	7,420,579	10,868,591	1.46	157

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 56.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by days-active group, 1955*

Days active	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
			Per million man-hours		Per million tons								
	Fatal	Non-fatal	Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1 to 49	9	70	5.80	45.13	7.11	55.34	5,993	33	196,000	1,550,918	1,265,018	0.82	713
50 to 99	11	202	2.14	39.34	2.73	50.13	8,766	74	651,769	5,134,370	4,029,440	.78	997
100 to 149	19	474	1.83	45.73	2.09	52.04	10,572	125	1,320,218	10,364,894	9,108,893	.88	1,060
150 to 199	57	2,079	1.34	48.96	1.46	53.15	30,029	180	5,403,372	42,459,499	39,113,935	.92	1,908
200 to 249	179	9,190	.87	44.62	.81	41.37	112,954	230	26,035,674	205,753,615	221,891,047	1.08	1,681
250 to 299	69	2,902	.96	46.59	.89	42.97	30,446	260	7,924,997	62,290,139	67,541,459	1.08	444
300 or more		59		47.05		71.78	503	311	156,428	1,254,105	821,977	.66	42
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845
Strip mines:													
1 to 49		14		49.74		18.19	1,323	27	35,303	281,476	769,711	2.73	200
50 to 99		23		24.95		10.53	1,634	71	115,429	921,703	2,184,406	2.37	234
100 to 149	5	48	2.68	25.72	1.28	12.25	1,843	125	229,585	1,866,550	3,918,479	2.10	220
150 to 199	5	91	1.29	23.51	.54	9.76	2,777	176	489,047	3,871,145	9,325,931	2.41	256
200 to 249	6	336	.48	26.75	.18	10.03	7,152	226	1,615,261	12,560,917	33,511,910	2.67	349
250 to 299	4	325	.25	20.54	.09	7.19	7,367	272	2,001,516	15,824,010	45,197,769	2.86	291
300 or more	2	131	.26	16.91	.10	6.50	3,054	311	951,248	7,748,428	20,146,983	2.60	161
Total	22	968	.51	22.47	.19	8.41	25,150	216	5,437,389	43,074,229	115,055,189	2.67	1,711
Auger mines:													
1 to 49							208	30	6,341	50,926	128,244	2.52	18
50 to 99		1		13.54		4.89	125	73	9,155	73,854	204,331	2.77	21
100 to 149		2		11.62		5.49	190	118	22,382	172,049	364,000	2.12	13
150 to 199	1	6	4.14	24.85	1.49	8.91	173	175	30,218	241,468	673,217	2.79	33
200 to 249		11		27.93		9.20	213	218	46,350	393,800	1,196,168	3.04	18
250 to 299	1	4	6.47	25.90	2.07	8.28	71	269	19,070	154,465	483,304	3.13	9
300 or more	1	8	2.41	19.25	1.55	12.44	146	321	46,831	415,522	643,150	1.55	8
Total	3	32	2.00	21.30	.81	8.67	1,126	160	180,347	1,502,084	3,692,423	2.46	120

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TABLE 57.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by days-active group, 1956*

Days active	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1 to 49	12	74	12.17	75.06	14.46	89.18	4,417	28	123,630	985,855	829,784	0.84	610
50 to 99	17	145	4.50	38.39	5.59	47.71	6,367	75	477,977	3,776,948	3,039,414	.80	855
100 to 149	25	442	2.66	47.05	3.12	55.22	9,674	124	1,196,140	9,394,558	8,004,326	.85	1,153
150 to 199	50	1,876	1.29	48.57	1.38	51.81	26,952	181	4,887,006	38,621,236	36,207,827	.94	1,711
200 to 249	221	11,264	.93	47.34	.82	41.70	131,746	227	29,969,638	237,942,022	270,135,086	1.14	2,386
250 to 299	37	1,450	.87	34.26	.86	33.72	20,492	263	5,391,398	42,325,391	43,004,499	1.02	542
300 or more	3	54	3.30	59.36	4.85	87.21	376	311	116,809	909,653	619,168	.68	36
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,663	361,840,104	1.08	7,293
Strip mines:													
1 to 49	.....	6	.....	34.85	.....	10.57	760	29	21,736	172,176	567,674	3.30	147
50 to 99	.....	19	.....	24.35	.....	9.08	1,256	77	97,116	780,188	2,093,468	2.68	205
100 to 149	2	47	1.22	28.73	.41	9.58	1,648	125	205,512	1,636,106	4,907,986	3.00	233
150 to 199	2	117	.42	24.41	.19	11.13	3,374	179	604,445	4,793,350	10,512,037	2.19	317
200 to 249	11	315	.87	24.77	.31	8.97	7,188	227	1,632,359	12,716,559	35,101,214	2.76	368
250 to 299	6	390	.37	23.77	.13	8.13	7,639	271	2,072,593	16,406,021	47,981,612	2.92	291
300 or more	4	189	.39	18.36	.16	7.44	4,064	312	1,269,341	10,296,490	25,403,192	2.47	179
Total	25	1,083	.53	23.14	.20	8.56	25,929	228	5,903,102	46,800,890	126,567,183	2.70	1,740
Auger mines:													
1 to 49	.....	2	.....	68.68	.....	39.04	142	26	3,634	29,120	51,232	1.76	15
50 to 99	.....	12	.....	125.07	.....	40.10	170	70	11,857	95,946	299,271	3.12	34
100 to 149	.....	6	.....	23.95	.....	10.25	259	122	31,548	250,470	585,116	2.34	33
150 to 199	.....	35	.....	67.92	.....	21.44	369	175	64,559	515,316	1,632,435	3.17	50
200 to 249	.....	20	.....	17.43	.....	5.38	637	221	141,026	1,147,226	3,717,752	3.24	56
250 to 299	2	6	9.62	28.87	3.17	9.52	90	268	24,102	207,851	629,934	3.03	13
300 or more	.....	17	.....	38.66	.....	18.73	158	315	49,724	439,735	907,535	2.06	12
Total	2	98	.74	36.49	.26	12.53	1,825	179	326,450	2,685,664	7,823,275	2.91	213

TABLE 58.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by days-active group, 1955*

Days active	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1 to 49	3	8	35.68	95.15	110.21	293.90	2,114	6	12,035	84,079	27,220	0.32	28
50 to 99	1	5	5.24	26.18	8.13	40.63	350	78	27,213	190,989	123,064	.64	59
100 to 149	6	152	2.07	52.37	6.07	153.81	3,006	134	402,255	2,902,245	988,207	.34	326
150 to 199	6	529	.68	60.35	1.41	123.98	7,173	172	1,236,836	8,765,966	4,266,700	.49	716
200 to 249	33	1,808	1.53	83.78	3.46	189.38	12,728	225	2,867,936	21,581,018	9,546,750	.44	142
250 to 299	3	80	2.06	54.81	3.55	94.56	750	272	204,040	1,459,503	846,041	.58	57
300 or more	.....	6	.....	51.21	.....	140.23	54	302	16,297	117,171	42,786	.37	8
Surface [1]	4	145	.99	35.77	.....	.....	3,251	171	556,230	4,054,135	.....	.....	.....
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336
Strip mines:													
1 to 49	.....	6	.....	215.73	.....	151.40	130	31	3,975	27,812	39,630	1.42	9
50 to 99	1	8	6.00	48.01	4.09	32.76	308	77	23,797	166,636	244,230	1.47	18
100 to 149	1	4	1.80	7.19	1.20	4.80	573	136	77,756	556,289	833,976	1.50	19
150 to 199	1	46	.67	30.76	.47	21.82	1,169	182	212,343	1,495,405	2,108,208	1.41	24
200 to 249	.....	72	.....	29.85	.....	19.02	1,541	221	341,303	2,411,780	3,784,997	1.57	40
250 to 299	.....	36	.....	25.34	.....	16.60	757	264	199,601	1,420,402	2,168,109	1.53	24
300 or more	.....	.....	.....	.....	.....	.....	49	314	15,404	109,947	128,487	1.17	3
Total	3	172	.48	27.79	.32	18.48	4,527	193	874,179	6,188,271	9,307,637	1.50	137

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 59.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by days-active group, 1956*

Days active	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
1 to 49	4	13	31.17	101.29	69.87	227.07	629	29	18,200	128,346	57,250	0.45	134
50 to 99	2	51	2.92	74.39	7.01	178.83	1,235	79	97,512	685,540	285,181	.42	221
100 to 149	1	33	1.61	53.08	3.36	110.94	735	121	88,753	621,674	297,464	.48	177
150 to 199	8	352	1.66	73.18	3.67	161.52	3,681	185	681,241	4,810,206	2,179,343	.45	180
200 to 249	29	2,103	1.17	84.56	2.59	187.66	14,433	231	3,332,811	24,869,907	11,206,528	.45	201
250 to 299	5	277	1.13	62.77	2.17	120.06	2,393	264	630,585	4,412,856	2,307,213	.52	209
300 or more	.....	29	.....	30.65	.....	50.40	447	306	136,793	946,279	575,382	.61	52
Surface [1]	3	179	.63	37.41	.....	.....	2,943	223	654,839	4,785,282	.....	.....	.....
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254
Strip mines:													
1 to 49	.....	4	.....	135.29	.....	56.20	124	34	4,167	29,566	71,177	2.41	13
50 to 99	.....	2	.....	22.09	.....	16.46	167	77	12,794	90,548	121,482	1.34	12
100 to 149	1	17	3.60	61.26	1.52	25.77	324	122	39,526	277,496	659,698	2.38	20
150 to 199	.....	12	.....	10.16	.....	7.05	957	173	165,139	1,181,006	1,701,878	1.44	27
200 to 249	.....	95	.....	31.82	.....	23.04	1,828	230	420,723	2,985,593	4,123,810	1.38	40
250 to 299	2	91	.83	37.65	.58	26.19	1,250	275	343,663	2,417,243	3,475,168	1.44	34
300 or more	.....	14	.....	31.88	.....	19.57	190	321	61,017	439,127	715,378	1.63	11
Total	3	235	.40	31.67	.28	21.62	4,840	216	1,047,029	7,420,579	10,868,591	1.46	157

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 60.—*Injury experience, employment, and production data on bituminous-coal mines (underground and surface works) in the United States, by thickness of bed or vein, 1956*

Thickness of bed or vein, inches	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Less than 24	2	37	1.39	25.67	2.82	52.25	1,138	162	184,100	1,441,260	708,124	0.49	94
25 to 36	40	1,314	1.47	48.37	2.02	66.50	17,636	195	3,430,219	27,164,172	19,758,716	.73	1,137
37 to 48	95	4,540	1.16	55.66	1.27	60.57	49,438	209	10,327,204	81,565,505	74,960,628	.92	1,622
49 to 60	63	2,676	1.19	50.64	1.06	45.20	31,152	215	6,706,693	52,844,619	59,207,053	1.12	691
61 to 72	27	1,789	.61	40.31	.49	32.43	24,723	227	5,613,014	44,378,259	55,171,299	1.24	418
73 to 84	31	1,430	.88	40.45	.69	31.78	20,335	220	4,473,067	35,348,478	44,992,482	1.27	201
85 to 96	27	917	.86	29.31	.69	23.43	17,839	223	3,973,830	31,288,507	39,140,309	1.25	124
97 to 108	12	305	1.75	44.39	1.29	32.86	4,375	199	869,674	6,870,428	9,281,109	1.35	69
109 or more	5	277	.90	50.01	.74	41.05	3,535	200	708,015	5,539,245	6,748,522	1.22	77
Not stated	30	1,621	.81	43.88	.89	47.95	26,039	180	4,675,382	36,945,261	33,803,527	.91	2,412
Surface [1]	3	60	.55	11.07	.....	.....	3,053	238	727,260	5,421,806	.....	.....	.....
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845

[1] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 61.—*Injury experience, employment, and production data on bituminous-coal mines (underground and surface works) in the United States, by thickness of bed or vein, 1956*

Thickness of bed or vein, inches	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Less than 24	1	74	0.33	24.56	0.35	25.86	1,943	197	383,701	3,013,615	2,861,439	0.95	81
25 to 36	28	1,454	1.07	55.58	1.38	71.64	16,958	195	3,303,855	26,160,804	20,295,095	.78	1,213
37 to 48	102	4,577	1.16	52.26	1.28	57.26	53,383	208	11,090,176	87,589,527	79,928,899	.91	2,156
49 to 60	52	2,445	1.11	52.24	.98	46.27	28,109	210	5,899,131	46,802,497	52,842,476	1.13	829
61 to 72	43	2,181	.87	44.38	.68	34.31	27,639	225	6,214,271	49,146,679	63,562,348	1.29	452
73 to 84	37	1,801	.89	43.36	.66	32.00	23,480	218	5,130,246	41,535,705	56,289,053	1.36	227
85 to 96	30	760	1.18	29.84	.96	24.43	14,379	225	3,236,952	25,473,132	31,106,675	1.22	118
97 to 108	4	255	.58	36.88	.36	22.88	4,143	211	872,229	6,913,538	11,145,251	1.61	54
109 or more	2	339	.30	50.19	.24	40.53	3,881	222	861,145	6,754,104	8,365,181	1.24	82
Not stated	66	1,348	1.93	39.48	1.86	38.03	22,449	192	4,301,660	34,144,260	35,443,687	1.04	2,081
Surface [1]	.....	71	.....	11.06	.....	.....	3,660	237	869,232	6,421,802	.....	.....	.....
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,633	361,840,104	1.08	7,293

[1] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 62.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by thickness of bed or vein, 1955*

Thickness of bed or vein, inches	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Less than 24	2	171	1.23	104.89	3.68	314.36	1,060	202	214,495	1,630,241	543,954	0.33	11
25 to 36	.....	52	.....	79.67	.....	166.60	470	197	92,466	652,724	312,127	.48	29
37 to 48	4	89	4.42	98.33	6.99	155.49	659	197	130,131	905,071	572,397	.63	36
49 to 60	2	106	1.21	64.19	2.85	150.98	1,409	165	231,867	1,651,292	702,100	.43	46
61 to 72	6	461	.98	75.51	1.86	142.75	4,034	201	809,392	6,104,754	3,229,475	.53	45
73 to 84	3	102	4.14	140.67	6.78	230.56	508	203	103,026	725,096	442,394	.61	20
85 to 96	6	307	1.42	72.86	3.39	173.57	2,534	220	557,329	4,213,717	1,768,757	.42	33
97 to 108	.....	5	.....	87.22	.....	131.30	724	11	8,316	57,327	38,082	.66	9
109 or more	8	429	1.27	68.00	2.52	135.04	6,037	144	870,067	6,309,104	3,176,943	.50	64
Not stated	21	866	1.63	67.38	4.15	171.33	8,740	200	1,749,523	12,851,645	5,054,539	.39	1,043
Surface [1]	4	145	.99	35.77	.....	.....	3,251	171	556,230	4,054,135	.....	.....	.....
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 63.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by thickness of bed or vein, 1956*

Thickness of bed or vein, inches	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Less than 24	1	12	5.61	67.37	10.15	121.79	149	170	25,298	178,130	98,533	0.55	18
25 to 36	1	69	1.04	71.63	2.10	144.67	663	204	135,252	963,288	476,948	.50	83
37 to 48	1	52	.82	42.43	1.49	77.66	841	212	178,556	1,225,652	669,600	.55	110
49 to 60	4	199	1.46	72.47	2.97	147.68	1,648	235	387,922	2,746,077	1,347,478	.49	102
61 to 72	6	246	1.77	72.47	3.33	136.36	2,052	224	460,006	3,394,576	1,804,034	.53	73
73 to 84	3	60	3.42	68.43	4.92	98.46	621	201	124,775	876,870	609,410	.69	45
85 to 96	5	487	.91	88.46	2.26	220.52	3,047	231	703,535	5,505,227	2,208,431	.40	40
97 to 108		15		83.75		128.13	121	213	25,825	179,103	117,072	.65	17
109 or more	5	623	.61	76.40	1.30	162.19	5,413	210	1,138,551	8,154,828	3,841,088	.47	72
Not stated	23	1,095	1.74	82.63	4.01	190.91	8,998	201	1,806,175	13,251,057	5,735,767	.43	694
Surface [1]	3	179	.63	37.41			2,943	223	654,839	4,785,282			
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 64.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by production group, 1955*

Production group, tons	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
Less than 25,000	76	1,644	1.85	40.04	2.74	59.27	37,352	140	5,221,672	41,061,353	27,739,259	0.68	5,690
25,000 to 49,999	16	669	1.19	49.69	1.50	62.89	9,140	186	1,699,042	13,462,774	10,637,671	.79	306
50,000 to 99,999	19	1,044	.96	52.50	1.12	61.70	12,143	208	2,525,000	19,887,317	16,920,273	.85	239
100,000 to 249,999	61	2,834	1.37	63.64	1.45	67.16	26,829	210	5,632,370	44,531,002	42,199,260	.95	250
250,000 to 499,999	52	3,396	.88	57.24	.83	54.49	32,876	229	7,523,987	59,330,672	62,325,249	1.05	172
500,000 to 749,999	27	1,469	.70	37.84	.58	31.69	21,423	229	4,916,354	38,817,187	46,359,580	1.19	78
750,000 to 999,999	24	1,269	.67	35.63	.59	31.25	19,320	233	4,498,188	35,612,473	40,607,279	1.14	47
1,000,000 or more	57	2,581	.81	36.52	.59	26.61	37,127	241	8,944,585	70,692,956	96,993,198	1.37	63
Surface [1]	3	60	.55	11.07			3,053	238	727,260	5,421,806			
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845
Strip mines:													
Less than 25,000	6	112	1.07	19.89	.77	14.46	5,305	131	695,762	5,629,866	7,743,177	1.38	1,040
25,000 to 49,999	4	98	.90	22.13	.48	11.77	2,765	199	549,137	4,428,693	8,323,174	1.88	227
50,000 to 99,999	1	137	.15	20.45	.07	10.00	3,618	228	824,756	6,698,279	13,697,298	2.04	192
100,000 to 249,999	6	196	.63	20.66	.26	8.55	4,901	240	1,177,957	9,487,337	22,921,245	2.42	153
250,000 to 499,999	3	161	.53	28.41	.16	8.85	2,876	252	726,085	5,666,917	18,182,725	3.21	49
500,000 to 749,999	1	124	.23	28.06	.06	7.93	2,355	246	578,995	4,418,999	15,638,016	3.54	25
750,000 to 999,999	1	55	.51	27.82	.12	6.78	1,037	253	262,619	1,977,098	8,113,173	4.10	10
1,000,000 or more		85		17.83		4.16	2,293	271	622,078	4,767,050	20,436,391	4.29	15
Total	22	968	.51	22.47	.19	8.41	25,150	216	5,437,389	43,074,229	115,055,189	2.67	1,711
Auger mines:													
Less than 25,000	2	6	5.52	16.57	3.23	9.68	442	103	45,432	362,014	619,870	1.71	83
25,000 to 49,999		3		23.70		7.71	119	133	15,857	126,593	389,271	3.08	11
50,000 to 99,999		11		21.62		9.72	267	213	56,867	508,798	1,131,657	2.22	16
100,000 or more	1	12	1.98	23.78	.64	7.73	298	209	62,191	504,699	1,551,625	3.07	10
Total	3	32	2.00	21.30	.81	8.67	1,126	160	180,347	1,502,034	3,692,423	2.46	120

[1] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 65.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by production group, 1956*

Production group, tons	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
Less than 25,000	89	1,614	2.04	37.01	2.82	51.07	36,660	151	5,539,317	43,611,131	31,606,689	0.72	5,754
25,000 to 49,999	11	723	.77	50.72	.95	62.65	8,831	204	1,802,439	14,253,940	11,541,193	.81	328
50,000 to 99,999	20	1,053	1.10	57.71	1.21	63.89	11,589	199	2,306,164	18,244,890	16,480,616	.90	278
100,000 to 249,999	47	2,395	1.24	62.96	1.27	64.93	22,408	215	4,823,916	38,042,323	36,885,858	.97	315
250,000 to 499,999	61	3,392	1.04	57.88	1.01	56.23	32,783	226	7,404,707	58,604,013	60,323,535	1.03	212
500,000 to 749,999	48	2,143	1.01	45.04	.86	38.53	25,943	228	5,910,209	47,576,136	55,625,146	1.17	288
750,000 to 999,999	25	1,079	.83	36.01	.68	29.43	16,741	226	3,791,046	29,960,646	36,667,261	1.22	43
1,000,000 or more	64	2,835	.83	36.70	.57	25.15	41,409	235	9,715,568	77,240,782	112,709,806	1.46	75
Surface [1]	.....	71	.....	11.06	.....	.....	3,660	237	869,232	6,421,802	.....	.....	.....
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,663	361,840,104	1.08	7,293
Strip mines:													
Less than 25,000	3	101	.58	19.53	.40	13.43	4,331	151	654,338	5,170,263	7,518,860	1.45	964
25,000 to 49,999	4	97	.83	20.19	.43	10.37	2,904	203	589,873	4,804,864	9,352,617	1.95	263
50,000 to 99,999	4	160	.54	21.60	.26	10.27	3,894	232	904,794	7,406,263	15,584,872	2.10	224
100,000 to 249,999	2	211	.19	19.88	.08	8.23	5,423	243	1,316,474	10,615,081	25,631,953	2.41	176
250,000 to 499,999	3	227	.41	31.35	.13	10.04	3,513	261	915,828	7,239,832	22,613,148	3.12	62
500,000 to 749,999	1	117	.23	26.62	.06	7.35	2,404	242	582,421	4,395,181	15,923,494	3.62	25
750,000 to 999,999	1	64	.37	23.69	.09	5.83	1,419	255	362,049	2,702,014	10,981,617	4.06	13
1,000,000 or more	7	106	1.57	23.73	.37	5.59	2,041	283	577,325	4,467,392	18,960,622	4.24	13
Total	25	1,083	.53	23.14	.20	8.56	25,929	228	5,903,102	46,800,890	126,567,183	2.70	1,740
Auger mines:													
Less than 25,000	2	23	3.56	40.97	1.50	17.26	608	116	70,577	561,337	1,332,406	2.37	135
25,000 to 49,999	.....	10	.....	24.85	.....	9.95	315	158	49,627	402,379	1,005,499	2.50	28
50,000 to 99,999	.....	22	.....	33.16	.....	12.27	336	229	77,044	663,471	1,793,705	2.70	27
100,000 or more	.....	43	.....	40.62	.....	11.65	566	228	129,202	1,058,477	3,691,665	3.49	23
Total	2	98	.74	36.49	.26	12.53	1,825	179	326,450	2,685,664	7,823,275	2.91	213

[1] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 66.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by production group, 1955*

Production group, tons	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
Less than 25,000	13	372	1.47	42.04	4.59	131.40	8,953	137	1,222,657	8,847,773	2,830,989	0.32	1,253
25,000 to 49,999	.....	117	.....	92.13	.....	143.63	873	203	176,957	1,269,932	814,565	.64	24
50,000 to 99,999	4	272	1.22	82.84	2.69	182.63	2,500	183	457,636	3,283,257	1,489,375	.45	23
100,000 to 249,999	15	536	2.60	92.99	5.43	194.06	3,656	210	768,023	5,763,808	2,761,977	.48	18
250,000 to 499,999	11	883	.98	78.68	2.23	179.24	7,420	202	1,499,678	11,222,030	4,926,265	.44	14
500,000 or more	9	408	1.91	86.55	2.98	135.21	2,773	231	641,661	4,714,171	3,017,597	.64	4
Surface [1]	4	145	.99	35.77	.....	.....	3,251	171	556,230	4,054,135	.....	.....	.....
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336
Strip mines:													
Less than 25,000	2	27	3.50	47.30	3.69	49.87	661	122	80,560	570,854	541,448	.95	53
25,000 to 49,999	.....	21	.....	23.77	.....	19.71	618	202	124,971	883,348	1,065,235	1.21	30
50,000 to 99,999	.....	39	.....	29.74	.....	18.03	935	199	186,170	1,311,474	2,163,110	1.65	30
100,000 to 249,999	1	40	.50	19.91	.33	13.29	1,384	204	282,312	2,009,144	3,009,022	1.50	18
250,000 or more	.....	45	.....	31.84	.....	17.79	929	215	200,166	1,413,451	2,528,822	1.79	6
Total	3	172	.48	27.79	.32	18.48	4,527	193	874,179	6,188,271	9,307,637	1.50	137

See footnote at end of table.

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TABLE 66.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by production group, 1955*—Continued

Production group, tons	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Washeries:													
Less than 25,000	.....	.....	.....	.....	.....	.....	56	90	5,059	35,413	34,333	.97	7
25,000 to 49,999	.....	4	.....	37.96	.....	13.76	176	82	14,376	105,379	290,717	2.76	3
50,000 to 99,999	.....	4	.....	46.05	.....	21.91	90	138	12,462	86,864	182,577	2.10	7
100,000 to 249,999	1	3	7.44	22.32	.90	2.70	121	160	19,343	134,401	1,111,441	8.27	5
250,000 or more	.....	2	.....	26.59	.....	1.27	48	224	10,746	75,220	1,574,762	20.94	3
Total	1	13	2.29	29.73	.31	4.07	491	126	61,986	437,277	3,193,830	7.30	25
Dredges:													
Less than 25,000	.....	.....	.....	.....	.....	.....	33	184	6,068	53,890	26,565	.49	6
25,000 or more	.....	1	.....	6.24	.....	1.73	73	272	19,857	160,218	579,446	3.62	2
Total	.....	1	.....	4.67	.....	1.65	106	245	25,925	214,108	606,011	2.83	8

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 67.—*Injury experience, employment, and production data on Pennsylvania anthracite mines, by production group, 1956*

Production group, tons	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
Less than 25,000	19	457	2.09	50.29	5.68	136.51	6,843	186	1,269,465	9,088,080	3,347,646	0.37	1,161
25,000 to 49,999	.....	149	.....	75.83	.....	118.16	1,366	203	277,204	1,964,883	1,260,950	.64	38
50,000 to 99,999	4	222	1.81	100.59	2.99	166.19	1,486	210	311,932	2,206,900	1,335,857	.61	20
100,000 to 249,999	10	430	2.71	116.49	5.03	216.11	2,222	226	501,702	3,691,230	1,989,773	.54	14
250,000 to 499,999	12	933	1.03	79.84	2.36	183.79	7,176	219	1,573,706	11,685,246	5,076,552	.43	15
500,000 or more	4	667	.51	85.09	1.03	171.13	4,460	236	1,051,886	7,838,469	3,897,583	.50	6
Surface [1]	3	179	.63	37.41	.....	.....	2,943	223	654,839	4,785,282	.....	.....	.....
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254
Strip mines:													
Less than 25,000	.....	31	.....	32.95	.....	46.41	919	159	146,444	1,031,773	732,637	.71	73
25,000 to 49,999	1	19	1.74	33.00	1.08	20.54	399	205	81,847	575,843	925,192	1.61	24
50,000 to 99,999	1	36	.67	23.96	.49	17.47	899	236	212,252	1,502,714	2,061,204	1.37	29
100,000 to 249,999	1	48	.56	26.66	.29	13.68	1,121	226	253,688	1,800,490	3,507,985	1.95	22
250,000 to 499,999	.....	58	.....	46.14	.....	30.91	780	228	177,914	1,257,159	1,876,501	1.49	6
500,000 or more	.....	40	.....	31.93	.....	22.66	722	242	174,884	1,252,600	1,765,072	1.41	3
Total	3	235	.40	31.67	.28	21.62	4,840	216	1,047,029	7,420,579	10,868,591	1.46	157
Washeries:													
Less than 25,000	1	39	1.64	63.99	1.13	44.08	582	145	84,368	609,488	884,831	1.45	48
25,000 to 49,999	.....	6	.....	37.35	.....	16.98	119	191	22,786	160,657	353,403	2.20	11
50,000 to 99,999	.....	1	.....	17.57	.....	2.88	43	177	7,599	56,902	346,962	6.10	5
100,000 to 249,999	.....	5	.....	15.52	.....	4.02	198	230	45,534	322,142	1,245,113	3.87	7
250,000 or more	.....	1	.....	9.57	.....	1.06	64	229	14,632	104,489	946,184	9.06	3
Total	1	52	.80	41.48	.26	13.77	1,006	174	174,919	1,253,678	3,776,493	3.01	74
Dredges:													
Less than 25,000	.....	2	.....	15.45	.....	23.85	92	127	11,672	129,470	83,873	.65	20
25,000 or more	.....	4	.....	25.67	.....	6.91	73	261	19,066	155,809	578,919	3.72	3
Total	.....	6	.....	21.03	.....	9.05	165	186	30,738	285,279	662,792	2.32	23

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 68.—*Injury experience, employment, and production data on bituminous-coal mines (underground and surface works) in the United States, by kind of mine opening, 1955*

Kind of opening	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Shaft	41	2,255	0.67	37.03	0.62	34.16	35,614	216	7,695,756	60,892,113	66,014,507	1.08	269
Slope	67	3,078	1.07	49.09	.86	39.69	37,108	215	7,994,836	62,703,596	77,554,602	1.24	791
Drift	196	8,280	1.17	49.24	1.13	47.57	100,094	212	21,266,051	168,149,447	174,077,077	1.04	3,441
Not stated	28	1,293	.88	40.87	1.07	49.49	23,394	171	4,004,555	31,640,578	26,125,583	.83	2,344
Surface [1]	3	60	.55	11.07	.....	.....	3,053	238	727,260	5,421,806	.....	.....	.....
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845

[1] Date on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 69.—*Injury experience, employment, and production data on bituminous-coal mines (underground and surface works) in the United States, by kind of mine opening, 1956*

Kind of opening	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Shaft	38	1,933	0.73	37.03	0.65	32.88	30,066	219	6,599,134	52,196,765	58,783,054	1.13	248
Slope	70	3,428	1.06	51.84	.81	39.86	39,089	215	8,404,490	66,121,035	86,001,531	1.30	836
Drift	195	8,613	1.09	48.07	1.04	45.72	106,935	210	22,507,467	179,170,657	188,392,460	1.05	4,203
Not stated	62	1,260	2.06	41.94	2.16	43.96	20,274	187	3,782,275	30,045,404	28,663,059	.95	2,006
Surface [1]	.....	71	.....	11.06	.....	.....	3,660	237	869,232	6,421,802	.....	.....	.....
Total	365	15,305	1.09	45.83	1.01	42.30	200,024	211	42,162,598	333,955,663	361,840,104	1.08	7,293

[1] Data on 63 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 70.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by kind of mine opening, 1955*

Kind of opening	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Shaft	34	1,833	1.51	81.68	3.73	200.91	15,679	190	2,983,234	22,442,473	9,123,510	0.41	62
Slope	18	651	2.20	79.57	3.63	131.12	6,488	178	1,151,834	8,181,772	4,965,030	.61	245
Drift	.....	50	.....	79.38	.....	127.16	482	183	88,258	629,913	393,196	.62	25
Not stated	.....	54	.....	14.04	.....	39.73	3,526	154	543,286	3,846,813	1,359,032	.35	1,004
Surface [1]	4	145	.99	35.77	.....	.....	3,251	171	556,230	4,054,135	.....	.....	.....
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336

[1] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 71.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by kind of mine opening, 1956*

Kind of opening	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Shaft	25	1,578	1.29	81.36	3.07	193.72	11,792	220	2,592,986	19,394,170	8,145,759	0.42	53
Slope	20	757	2.06	78.14	3.44	130.30	6,512	212	1,379,269	9,687,858	5,809,848	.60	525
Drift		56		84.32		126.15	411	228	93,733	664,103	443,899	.67	51
Not stated	4	467	.59	69.40	1.59	186.14	4,838	190	919,907	6,728,677	2,508,855	.37	625
Surface [1]	3	179	.63	37.41			2,943	223	654,839	4,785,282			
Total	52	3,037	1.26	73.61	3.08	179.62	26,496	213	5,640,734	41,260,090	16,908,361	.41	1,254

[1] Data on 133 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 72.—*Injury experience, employment, and production data on bituminous-coal mines (underground and surface works) in the United States, by kind of lamp, 1955* [1]

Kind of lamp	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Electric	260	12,662	0.97	47.44	0.87	42.54	154,144	219	33,787,656	266,931,659	297,630,830	1.12	2,006
Carbide	24	559	1.52	35.30	2.27	52.98	13,126	155	2,033,484	15,836,138	10,551,468	.67	2,142
Other	1	93	.73	67.80	.90	84.00	912	191	174,116	1,371,659	1,107,164	.81	77
Electric and carbide		34		40.86		58.68	628	168	105,812	832,021	579,451	.70	73
Other combinations	1	51	.81	41.26	1.23	62.50	833	188	156,638	1,235,933	815,988	.66	58
Not stated	46	1,507	1.24	40.53	1.39	45.55	26,567	177	4,703,492	37,178,324	33,086,868	.89	2,489
Surface [2]	3	60	.55	11.07			3,053	238	727,260	5,421,806			
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845

[1] Data not collected for 1956.
[2] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 73.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by kind of lamp, 1955* [1]

Kind of lamp	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Electric	49	2,477	1.61	81.28	3.51	177.35	22,097	186	4,113,245	30,476,186	13,966,622	0.46	280
Carbide		39		94.81		109.26	277	208	57,749	411,361	356,949	.87	37
Electric and carbide		12		130.30		199.78	77	170	13,069	92,095	60,065	.65	5
Not stated	3	60	.73	14.56	2.06	41.18	3,724	156	582,549	4,121,329	1,457,132	.35	1,014
Surface [2]	4	145	.99	35.77			3,251	171	556,230	4,054,135			
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336

[1] Data not collected for 1956.
[2] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 74.—*Injury experience, employment, and production data on bituminous-coal mines (underground and surface works) in the United States, by gas rating, 1955* [1]

Gas rating	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Gassy	150	7,739	0.88	45.23	0.76	39.23	95,710	226	21,671,205	171,101,670	197,275,913	1.15	581
Nongassy	132	5,679	1.15	49.46	1.15	49.64	72,984	199	14,548,990	114,819,361	114,403,118	1.00	3,543
Not rated	6	190	1.64	52.00	1.48	46.93	2,537	184	466,008	3,654,041	4,048,537	1.11	226
Not stated	44	1,298	1.30	38.39	1.57	46.28	24,979	171	4,274,995	33,810,662	28,044,201	.83	2,495
Surface [2]	3	60	.55	11.07	.....	.....	3,053	238	727,260	5,421,806	.....	.....	.....
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845

[1] Data not collected for 1956.
[2] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

TABLE 75.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by gas rating, 1955* [1]

Gas rating	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Gassy	33	1,744	1.48	78.01	2.99	157.95	17,284	175	3,030,824	22,357,195	11,041,425	0.49	284
Nongassy	17	782	1.96	89.98	5.04	231.74	5,184	225	1,164,228	8,690,909	3,374,508	.39	34
Not stated	2	62	.49	15.30	1.40	43.51	3,707	154	571,560	4,052,867	1,424,835	.35	1,018
Surface [2]	4	145	.99	35.77	.....	.....	3,251	171	556,230	4,054,135	.....	.....	.....
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336

[1] Data not collected for 1956.
[2] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 76.—*Injury experience, employment, and production data on bituminous-coal mines in the United States, by type of explosive used, 1955* [1]

Type of explosive	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Underground mines (includes surface works):													
Black blasting powder	14	429	1.47	45.19	1.47	44.96	6,014	203	1,221,687	9,493,885	9,542,105	1.01	402
Black blasting powder and permissibles	1	21	1.13	23.68	1.60	33.61	669	172	115,036	886,797	624,872	.70	100
Black blasting powder and other high explosives [2]							25	94	2,354	18,832	3,933	.21	3
Permissibles	214	9,447	.96	42.38	.94	41.39	132,053	214	28,207,397	222,889,626	228,231,487	1.02	3,552
Permissibles and other high explosives [2]	2	15	4.74	35.52	3.46	25.95	230	232	53,367	422,244	578,117	1.37	6
Permissibles and Cardox	4	98	2.14	52.44	2.08	51.06	1,243	191	237,278	1,868,755	1,919,167	1.03	29
Permissibles and Airdox	21	1,138	1.33	72.15	1.19	64.30	8,783	227	1,995,950	15,771,988	17,697,362	1.12	44
Other high explosives [2]	1	80	1.03	82.22	.94	74.91	714	175	124,875	973,043	1,067,970	1.10	32
Cardox		135		93.63		73.96	831	219	182,119	1,441,867	1,825,302	1.27	17
Cardox and Airdox	1	111	.99	109.64	1.20	133.49	588	217	127,837	1,012,431	831,525	.82	2
Airdox	25	1,606	1.04	66.60	.63	40.30	14,325	213	3,054,238	24,114,735	39,853,974	1.65	96
None used	1	121	.42	51.38	.30	36.75	1,449	207	299,949	2,355,109	3,292,411	1.40	70
Combination of 3	3	62	2.64	54.52	2.95	60.94	588	246	144,594	1,137,240	1,017,434	.89	3
Cardox and 2 others		70		92.81		91.39	418	230	96,150	754,258	765,957	1.02	3
Airdox and 2 others	1	42	.49	20.71	.42	17.67	974	265	258,159	2,028,060	2,376,664	1.17	3
Not stated	44	1,531	1.15	40.06	1.29	44.84	27,306	177	4,840,208	38,216,864	34,143,489	.89	2,483
Surface [3]	3	60	.55	11.07			3,053	238	727,260	5,421,806			
Total	335	14,966	1.02	45.52	.97	43.53	199,263	209	41,688,458	328,807,540	343,771,769	1.05	6,845
Strip mines:													
Black blasting powder	4	54	2.15	29.05	.80	12.09	1,123	208	233,990	1,858,655	4,465,097	2.40	103
Black blasting powder and permissibles		18		16.31		4.43	603	242	146,019	1,103,829	4,060,711	3.68	29
Black blasting powder and other high explosives [2]		13		34.81		12.36	226	254	57,446	373,492	1,051,667	2.82	9
Permissibles	3	254	.30	25.25	.11	9.13	5,652	225	1,272,784	10,060,767	27,820,323	2.77	333
Permissibles and other high explosives [2]							62	212	13,151	102,263	224,317	2.19	7
Permissibles and Lox		8		8.02		2.36	494	268	132,292	997,264	3,387,616	3.40	3
Other high explosives [2]	2	126	.36	22.42	.12	7.85	3,192	224	714,132	5,620,965	16,042,254	2.85	167
Lox	1	15	.64	9.64	.20	3.06	827	248	204,979	1,556,750	4,899,892	3.15	9
Airdox		2		13.46		7.10	55	338	18,575	148,601	281,601	1.90	2
None used	1	34	.56	19.17	.23	7.66	1,032	210	217,214	1,773,542	4,437,091	2.50	101
Combination of 3							2	150	300	2,400	3,338	1.39	1
Lox and 2 others	2	1	23.57	11.79	5.07	2.53	45	245	11,034	84,842	394,607	4.65	2
Not stated	9	443	.46	22.85	.19	9.23	11,837	204	2,415,473	19,390,859	47,986,495	2.47	945
Total	22	968	.51	22.47	.19	8.41	25,150	216	5,437,389	43,074,229	115,055,189	2.67	1,711
Auger mines:													
Permissibles		6		36.39		14.07	121	153	18,485	164,897	426,505	2.59	3
Other high explosives [2]		6		23.24		18.43	83	311	25,818	258,180	325,607	1.26	5
None used		2		19.34		6.91	62	203	12,601	103,393	289,239	2.80	10
Not stated	3	18	3.07	18.45	1.13	6.79	860	144	123,443	975,614	2,651,072	2.72	102
Total	3	32	2.00	21.30	.81	8.67	1,126	160	180,347	1,502,084	3,692,423	2.46	120

[1] Data not collected for 1956.
[2] High explosives other than permissibles.
[3] Data on 61 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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TABLE 77.—*Injury experience, employment, and production data on Pennsylvania anthracite mines (underground and surface works), by type of explosive used, 1955* [1]

Type of explosive	Number of injuries		Frequency rates				Men at work	Days active	Man-days worked	Man-hours worked	Production, short tons	Tons per man-hour	Number of mines
	Fatal	Non-fatal	Per million man-hours		Per million tons								
			Fatal	Non-fatal	Fatal	Non-fatal							
Black blasting powder	1	32	1.98	63.36	3.88	124.11	474	149	70,489	505,040	257,835	0.51	16
Black blasting powder and permissibles							4	200	800	5,600	4,991	.89	1
Black blasting powder and other high explosives [2]							22	41	902	7,052			1
Permissibles	20	1,013	1.57	79.59	3.02	152.92	9,114	194	1,767,033	12,728,011	6,624,473	.52	232
Permissibles and other high explosives [2]	25	1,205	1.81	87.17	4.19	201.85	10,730	173	1,860,506	13,823,292	5,969,889	.43	59
Permissibles and mechanical							19	151	2,870	20,351	4,429	.22	1
High explosives [2]	2	140	.93	65.23	2.13	149.30	1,195	224	267,613	2,146,166	937,713	.44	12
Combination of 3	2	156	.89	69.04	2.74	213.80	1,253	227	284,878	2,259,521	729,646	.32	5
Not stated	2	42	.55	11.65	1.52	32.02	3,364	152	511,521	3,605,938	1,311,792	.36	1,009
Surface [3]	4	145	.99	35.77			3,251	171	556,230	4,054,135			
Total	56	2,733	1.43	69.80	3.54	172.53	29,426	181	5,322,842	39,155,106	15,840,768	.40	1,336

[1] Data not collected for 1956.
[2] High explosives other than permissibles.
[3] Data on 100 surface installations (preparation plants and general repair shops) that could not be assigned to any single underground mine.

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INJURY EXPERIENCE, BY STATES, 1955–56

Reports were received from 29 States producing bituminous coal, lignite, and anthracite in 1956. Fifteen of these States—Alaska, Arizona, Arkansas, California, Georgia, Iowa, Kansas, Missouri, Montana, New Mexico, North Dakota, Oregon, South Dakota, Texas, and Washington—reported no fatalities. Four States—Arizona, California, Georgia, and Oregon—reported no disabling injuries. The fatality rates in six bituminous-coal-producing States—Indiana, Colorado, Utah, Pennsylvania, Ohio, and Illinois—were lower than the average of 1.02 per million man-hours for the bituminous-coal industry. The average fatality rate of 1.03 for all coal mines was exceeded by the Pennsylvania anthracite industry and by eight bituminous-coal States. The rates ranged from 1.09 in Alabama to 1.77 in Virginia. Fifteen States recorded nonfatal-injury rates lower than the rate of 42.99 for the bituminous-coal industry. Kentucky, with a rate of 45.43, was higher than the average for bituminous-coal mines but lower than the national average for all coal mines. Nine States and Pennsylvania anthracite recorded nonfatal-injury rates higher than the average rate of 45.69 for the industry as a whole.

Seven States—West Virginia, Pennsylvania, Kentucky, Illinois, Virginia, Ohio, and Alabama—accounted for 84 percent of all underground bituminous-coal mines and produced 93 percent of the total underground tonnage.

In 1956, 79 percent of the Nation's bituminous-coal stripping operations were located in six States (Ohio, Pennsylvania, Illinois, Kentucky, West Virginia, and Indiana) and produced 85 percent of the strip tonnage.

Of the six States reporting auger mining operations, West Virginia and Ohio accounted for 57 percent of the total number of auger operations and produced 77 percent of the total tonnage.

In the Pennsylvania anthracite region 1,254 mines, or 89 percent of all active mines, were underground operations. These mines worked 28 million man-hours and produced 21 million tons of coal. Stripping operations reported 157 active mines, worked 7 million man-hours, and produced 11 million tons of coal.

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TABLE 78.—*Relative standing of States according to fatal- and nonfatal-injury rates per million man-hours of exposure, 1955*

State	Fatality rate	State	Nonfatal-injury rate
Oklahoma		Arizona	
Missouri		South Dakota	
Maryland		Oregon	
North Dakota		California	
Alaska		Alabama	13. 94
Montana		Kansas	23. 31
Kansas		Maryland	26. 43
New Mexico		Pennsylvania (bituminous)	26. 73
Georgia		New Mexico	27. 66
Arizona		Missouri	27. 73
South Dakota		Ohio	28. 17
Oregon		Wyoming	28. 50
California		North Dakota	28. 77
Pennsylvania (bituminous)	0. 60	Georgia	28. 90
Ohio	. 70	Colorado	34. 64
Indiana	. 72	Tennessee	35. 51
Alabama	. 73	Virginia	38. 93
Illinois	. 90	Utah	40. 95
		Iowa	42. 75
United States bituminous	. 96		
		United States bituminous	42. 76
Tennessee	. 98		
Iowa	. 99	Kentucky	43. 26
		Arkansas	43. 30
United States average	1. 00		
		United States average	45. 03
Kentucky	1. 05		
West Virginia	1. 12	Indiana	46. 11
Pennsylvania (anthracite)	1. 30	Illinois	48. 46
Arkansas	1. 31	Montana	49. 08
Utah	1. 40	Oklahoma	57. 53
Virginia	1. 53	West Virginia	59. 53
Colorado	1. 97	Pennsylvania (anthracite)	63. 46
Wyoming	2. 71	Alaska	110. 54
Washington	4. 42	Washington	130. 46

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TABLE 79.—*Relative standing of States according to fatal- and nonfatal-injury rates per million man-hours of exposure, 1956*

State	Fatality rate	State	Nonfatal-injury rate
Missouri	----------	Arizona	----------
Iowa	----------	Georgia	----------
Arkansas	----------	California	----------
Washington	----------	Oregon	----------
Alaska	----------	Alabama	13. 54
North Dakota	----------	Kansas	14. 01
Montana	----------	Wyoming	19. 31
Kansas	----------	Maryland	23. 10
Texas	----------	Missouri	23. 52
New Mexico	----------	Ohio	24. 37
Arizona	----------	Texas	25. 51
South Dakota	----------	Pennsylvania (bituminous)	27. 53
Georgia	----------	New Mexico	29. 73
California	----------	Virginia	32. 27
Oregon	----------	Tennessee	33. 25
Indiana	0. 44	North Dakota	33. 33
Colorado	. 50	Iowa	35. 23
Utah	. 59	Utah	36. 61
Pennsylvania (bituminous)	. 64	Colorado	40. 09
Ohio	. 73		
Illinois	. 97	United States bituminous	42. 99
United States bituminous	1. 02	Kentucky	45. 43
United States average	1. 03	United States average	45. 69
Alabama	1. 09	South Dakota	47. 19
Pennsylvania (anthracite)	1. 12	Illinois	49. 82
West Virginia	1. 13	Arkansas	50. 75
Maryland	1. 15	Montana	53. 79
Tennessee	1. 33	Indiana	56. 27
Kentucky	1. 36	West Virginia	58. 39
Wyoming	1. 54	Pennsylvania (anthracite)	66. 31
Oklahoma	1. 74	Oklahoma	72. 49
Virginia	1. 77	Alaska	112. 15
		Washington	129. 45

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TABLE 80.—*Injury experience, employment, and production data on coal mines in the United States, by States and general location, 1955*

State	Number of mines				Men working			
					Underground mines			
	Underground	Strip	Auger	Total	Underground	Surface [1]	Total	Strip mines
Alabama	279	39		318	6,763	1,590	8,353	721
Alaska	6	7		13	133	73	206	90
Arizona	2			2	19	4	23	
Arkansas	17	12		29	380	76	456	129
California		1		1				2
Colorado	140	8		148	2,069	531	2,600	98
Georgia	6			6	22	3	25	
Illinois	112	87		199	8,019	2,540	10,559	3,152
Indiana	47	54		101	1,782	648	2,430	1,828
Iowa	41	41		82	387	67	454	275
Kansas	4	22		26	38	5	43	251
Kentucky	1,868	135	29	2,032	28,839	6,632	35,471	2,524
Maryland	115	27		142	432	91	523	135
Missouri	23	31		54	187	45	232	644
Montana	34	16		50	226	90	316	79
New Mexico	36	3		39	181	53	234	11
North Dakota	9	51		60	22	2	24	400
Ohio	280	261	12	553	5,144	1,549	6,693	4,417
Oklahoma	21	19		40	764	146	910	374
Oregon	3			3	6	2	8	
Pennsylvania (bituminous)	919	580	18	1,517	34,366	7,493	41,859	6,289
South Dakota	1	2		3	1		1	10
Tennessee	670	105	4	779	4,736	1,062	5,798	708
Texas		2		2				123
Utah	52			52	1,992	786	2,778	
Virginia	991	29	13	1,033	10,735	2,595	13,330	277
Washington	12	1		13	357	160	517	9
West Virginia	1,131	169	44	1,344	52,179	12,453	64,632	2,423
Wyoming	26	9		35	581	207	788	181
Total bituminous	6,845	1,711	120	8,676	160,360	38,903	199,263	25,150
Pennsylvania (anthracite) [2]	1,336	137		1,473	20,530	9,493	30,023	4,527
Grand total [3]	8,181	1,848	120	10,149	180,890	48,396	229,286	29,677

State	Men working.—Con.		Days active	Man-days of work					
	Auger mines	Total		Underground mines			Strip mines	Auger mines	Total
				Underground	Surface [1]	Total			
Alabama		9,074	211	1,444,611	333,138	1,777,749	137,431		1,915,180
Alaska		296	255	35,096	20,512	55,608	19,856		75,464
Arizona		23	139	2,716	479	3,195			3,195
Arkansas		585	160	58,841	10,603	69,444	24,152		93,596
California		2	250				500		500
Colorado		2,698	192	400,457	103,729	504,186	14,889		519,075
Georgia		25	173	3,768	558	4,326			4,326
Illinois		13,711	199	1,489,387	480,642	1,970,029	754,230		2,724,259
Indiana		4,258	211	352,504	131,259	483,763	412,837		896,600
Iowa		729	182	62,173	10,687	72,860	59,630		132,490
Kansas		294	195	4,512	625	5,137	52,208		57,345
Kentucky	360	38,355	185	5,300,501	1,207,074	6,507,575	544,967	43,012	7,095,554
Maryland		658	146	62,776	14,441	77,217	18,595		95,812
Missouri		876	218	31,130	7,017	38,147	152,490		190,637
Montana		395	179	41,108	16,775	57,883	12,634		70,517
New Mexico		245	195	35,006	10,344	45,350	2,304		47,654
North Dakota		424	210	3,168	380	3,548	85,515		89,063
Ohio	46	11,156	228	1,118,495	350,969	1,469,464	1,064,768	6,659	2,540,891
Oklahoma		1,284	183	127,992	25,046	153,038	81,803		234,841
Oregon		8	166	1,020	304	1,324			1,324
Pennsylvania (bituminous)	66	48,214	216	7,477,288	1,623,843	9,101,131	1,310,383	10,458	10,421,972
South Dakota		11	241	150		150	2,500		2,650
Tennessee	20	6,526	158	747,150	169,310	916,460	112,687	3,028	1,032,175
Texas		123	292				35,857		35,857
Utah		2,778	230	456,044	182,626	638,670			638,670
Virginia	71	13,678	212	2,179,024	647,690	2,826,714	62,301	11,154	2,900,169
Washington		526	221	79,219	35,165	114,384	1,835		116,219
West Virginia	563	67,618	224	11,785,204	2,858,135	14,643,339	430,429	106,036	15,179,804
Wyoming		969	196	109,170	38,597	147,767	42,588		190,355
Total bituminous	1,126	225,539	210	33,408,510	8,279,948	41,688,458	5,437,389	180,347	47,306,194
Pennsylvania (anthracite) [2]		34,550	182	3,667,678	1,743,075	5,410,753	874,179		6,284,932
Grand total [2]	1,126	260,089	206	37,076,188	10,023,023	47,099,211	6,311,568	180,347	53,591,126

See footnotes at end of table.

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TABLE 80.—*Injury experience, employment, and production data on coal mines in the United States, by States and general location, 1955*—Continued

State	Man-hours of work						Production, short tons—underground mines [1]
	Underground mines			Strip mines	Auger mines	Total	
	Underground	Surface [1]	Total				
Alabama	11,527,125	2,457,140	13,984,265	1,077,781		15,062,046	11,083,802
Alaska	280,858	164,932	445,790	160,299		606,089	313,580
Arizona	21,728	3,832	25,560			25,560	[3]
Arkansas	477,667	79,963	557,630	204,463		762,093	299,154
California				4,000		4,000	
Colorado	3,188,592	770,920	3,959,512	111,070		4,070,582	2,995,288
Georgia	30,144	4,464	34,608			34,608	[3]
Illinois	11,801,346	3,569,583	15,370,929	5,699,787		21,070,716	27,829,881
Indiana	2,809,339	979,467	3,788,806	3,108,309		6,897,115	4,957,891
Iowa	483,710	82,901	566,611	439,189		1,005,800	300,774
Kansas	34,608	4,752	39,360	389,711		429,071	15,104
Kentucky	42,346,413	9,100,615	51,447,028	4,322,393	331,121	56,100,542	54,539,754
Maryland	495,009	113,098	608,107	148,722		756,829	301,175
Missouri	238,499	54,183	292,682	1,149,780		1,442,462	111,833
Montana	325,680	124,177	449,857	100,233		550,090	454,722
New Mexico	265,929	77,197	343,126	18,432		361,558	[3]
North Dakota	28,260	3,440	31,700	663,380		695,080	22,370
Ohio	8,834,022	2,624,721	11,458,743	8,546,894	53,536	20,059,173	12,625,798
Oklahoma	1,021,722	182,368	1,204,090	655,957		1,860,047	692,809
Oregon	7,760	2,233	9,993			9,993	[3]
Pennsylvania (bituminous)	59,891,642	12,055,703	71,947,345	10,749,357	83,621	82,780,323	64,866,680
South Dakota	1,088		1,088	20,000		21,088	[3]
Tennessee	5,936,783	1,322,953	7,259,736	911,615	24,224	8,195,575	4,999,999
Texas				286,860		286,860	
Utah	3,656,641	1,349,172	5,005,813			5,005,813	6,234,269
Virginia	17,427,563	4,861,718	22,289,281	483,731	89,227	22,862,239	20,138,797
Washington	633,564	257,594	891,158	13,308		904,466	575,534
West Virginia	94,422,063	21,215,076	115,637,139	3,493,112	920,355	120,050,606	128,835,594
Wyoming	872,592	284,991	1,157,583	315,846		1,473,429	1,381,969
All other [3]							194,992
Total bituminous	267,060,347	61,747,193	328,807,540	43,074,229	1,502,084	373,383,853	343,771,769
Pennsylvania (anthracite)	26,952,904	12,853,587	39,806,491	6,188,271		45,994,762	19,640,609
Grand total	294,013,251	74,600,780	368,614,031	49,262,500	1,502,084	419,378,615	363,412,378

State	Production, short tons			Tons per man-hour			
	Strip mines	Auger mines	Total	Underground mines [1]	Strip mines	Auger mines	Total
Alabama	1,958,702		13,042,504	0.79	1.82		0.87
Alaska	336,268		649,848	.70	2.10		1.07
Arizona			[3]	[3]			[3]
Arkansas	264,249		563,403	.54	1.29		.74
California	[3]		[3]		[3]		[3]
Colorado	358,690		3,353,978	.76	3.23		.82
Georgia			[3]	[3]			[3]
Illinois	18,644,878		46,474,759	1.81	3.27		2.21
Indiana	11,122,031		16,079,922	1.31	3.58		2.33
Iowa	979,116		1,279,890	.53	2.23		1.27
Kansas	653,535		668,639	.38	1.68		1.56
Kentucky	13,789,113	825,961	69,154,828	1.06	3.19	2.49	1.23
Maryland	224,809		525,984	.50	1.51		.69
Missouri	3,078,162		3,189,995	.38	2.68		2.21
Montana	810,894		1,265,616	1.01	8.09		2.30
New Mexico	[3]		[3]	[3]	[3]		[3]
North Dakota	3,061,547		3,083,917	.71	4.62		4.44
Ohio	24,226,067	215,683	37,067,548	1.10	2.83	4.03	1.85
Oklahoma	1,443,881		2,136,690	.58	2.20		1.15
Oregon			[3]	[3]			[3]
Pennsylvania (bitiminous)	19,746,271	124,104	84,737,055	.90	1.84	1.48	1.02
South Dakota	[3]		[3]	[3]	[3]		[3]
Tennessee	1,934,239	32,772	6,967,010	.69	2.12	1.35	.85
Texas	[3]		[3]		[3]		[3]
Utah			6,234,269	1.25			1.25
Virginia	853,912	150,008	21,142,717	.90	1.77	1.68	.92
Washington	47,093		622,627	.65	3.54		.69
West Virginia	9,787,198	2,343,895	140,966,687	1.11	2.80	2.55	1.17
Wyoming	1,538,684		2,920,653	1.19	4.87		1.98
All other [3]	195,850		390,842				
Total bituminous	115,055,189	3,692,423	462,519,381	1.05	2.67	2.46	1.24
Pennsylvania (anthracite)	9,307,637		28,948,246	.49	1.50		.63
Grand total	124,362,826	3,692,423	491,467,627	.99	2.52	2.46	1.17

[1] Includes breakers, shops, yards, washeries, and dredges at Pennsylvania anthracite mines.

[2] Number of mines does not include 25 washeries, 8 dredges, and 100 surface installations (preparation plants and general repair shops).

[3] Production included in "all other."

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TABLE 81.—*Injury experience, employment, and production data on coal mines in the United States, by States and general location, 1956*

State	Number of mines				Men working			
					Underground mines			
	Underground	Strip	Auger	Total	Underground	Surface [1]	Total	Strip mines
Alabama	228	37		265	6,314	1,500	7,814	681
Alaska	6	6		12	113	74	187	128
Arizona	2			2	16	5	21	
Arkansas	18	9		27	442	77	519	112
California		1		1				3
Colorado	134	7		141	1,978	503	2,481	86
Georgia	4	1		5	11	4	15	1
Illinois	97	82		179	7,204	2,207	9,411	3,118
Indiana	44	52		96	1,756	555	2,311	1,746
Iowa	34	27		61	344	50	394	211
Kansas	4	20		24	39	5	44	228
Kentucky	2,177	153	43	2,373	29,384	6,629	36,013	2,672
Maryland	106	28		134	399	90	489	147
Missouri	26	37		63	284	51	335	677
Montana	35	10		45	243	95	338	63
New Mexico	29	2		31	136	50	186	10
North Dakota	8	46		54	21	2	23	377
Ohio	245	238	42	525	4,957	1,511	6,468	4,317
Oklahoma	19	22		41	694	129	823	424
Oregon	1			1	1	1	2	
Pennsylvania (bituminous)	1,093	662	21	1,776	33,797	7,412	41,209	6,737
South Dakota	1	1		2	1		1	9
Tennessee	636	78	9	723	4,614	1,074	5,688	651
Texas		2		2				131
Utah	52			52	2,153	745	2,898	
Virginia	925	27	19	971	9,663	2,235	11,898	458
Washington	11	1		12	300	131	431	10
West Virginia	1,336	182	79	1,597	55,993	13,344	69,337	2,744
Wyoming	22	9		31	502	186	688	188
Total bituminous	7,293	1,740	213	9,246	161,359	38,665	200,024	25,929
Pennsylvania (anthracite)[3]	1,254	157		1,411	17,902	9,765	27,667	4,840
Grand total [2]	8,547	1,897	213	10,657	179,261	48,430	227,691	30,769

State	Men working.—Con.		Days active	Man-days of work					
	Auger mines	Total		Underground mines			Strip mines	Auger mines	Total
				Underground	Surface [1]	Total			
Alabama		8,495	206	1,295,970	313,277	1,609,247	140,690		1,749,937
Alaska		315	246	28,935	19,902	48,837	28,595		77,432
Airzona		21	176	2,829	874	3,703			3,703
Arkansas		631	161	69,036	9,969	79,005	22,827		101,832
California		3	178				535		535
Colorado		2,567	197	393,514	96,428	489,942	16,189		506,131
Georgia		16	124	1,355	529	1,884	92		1,976
Illinois		12,529	212	1,461,024	445,757	1,906,781	751,196		2,657,977
Indiana		4,057	217	354,610	112,980	467,590	411,205		878,795
Iowa		605	220	56,969	8,831	65,800	67,293		133,093
Kansas		272	245	4,512	570	5,082	61,429		66,511
Kentucky	354	39,039	186	5,421,193	1,234,492	6,655,685	583,541	37,304	7,276,530
Maryland		636	172	66,351	15,793	82,144	27,530		109,674
Missouri		1,012	217	43,669	7,430	51,099	168,635		219,734
Montana		401	160	37,712	15,518	53,230	11,102		64,332
New Mexico		196	203	27,653	10,047	37,700	2,075		39,775
North Dakota		400	203	2,644	281	2,925	78,291		81,216
Ohio	223	11,008	237	1,105,352	353,379	1,458,731	1,099,697	45,140	2,603,568
Oklahoma		1,247	174	100,403	20,120	120,523	96,682		217,205
Oregon		2	111	111	111	222			222
Pennsylvania (bituminous)	60	48,006	218	7,377,135	1,630,358	9,007,493	1,454,884	9,250	10,471,627
South Dakota		10	258	70		70	2,510		2,580
Tennessee	66	6,405	178	821,956	196,185	1,018,141	110,581	10,214	1,138,936
Texas		131	337				44,127		44,127
Utah		2,898	223	481,249	163,861	645,110			645,110
Virginia	196	12,552	210	2,034,435	470,656	2,505,091	103,353	27,778	2,636,222
Washington		441	207	62,377	27,180	89,557	1,590		91,147
West Virginia	926	73,007	225	12,594,193	3,040,537	15,634,730	572,927	196,764	16,404,421
Wyoming		876	192	88,235	34,041	122,276	45,526		167,802
Total bituminous	1,825	227,778	212	33,933,492	8,229,106	42,162,598	5,903,102	326,450	48,392,150
Pennsylvania (anthracite)[3]		32,507	212	3,790,762	2,055,629	5,846,391	1,047,029		6,893,420
Grand total [2]	1,825	260,285	212	37,724,254	10,284,735	48,008,989	6,950,131	326,450	55,285,570

See footnotes at end of table.

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TABLE 81.—*Injury experience, employment, and production data on coal mines in the United States, by States and general location, 1956*—Continued

State	Man-hours of work						Production, short tons underground mines [1]
	Underground mines			Strip mines	Auger mines	Total	
	Underground	Surface [1]	Total				
Alabama	10,352,634	2,315,244	12,667,878	1,070,861		13,738,739	10,464,654
Alaska	231,480	169,488	400,968	241,028		641,996	264,905
Arizona	22,632	6,992	29,624			29,624	[3]
Arkansas	559,053	76,041	635,094	192,499		827,593	307,375
California				4,280		4,280	
Colorado	3,129,272	716,143	3,845,415	120,601		3,966,016	2,931,568
Georgia	11,088	4,232	15,320	736		16,056	[3]
Illinois	11,688,055	3,332,917	15,020,972	5,672,668		20,693,640	29,073,589
Indiana	2,828,719	848,706	3,677,425	3,093,772		6,771,197	5,169,384
Iowa	441,661	68,252	509,913	426,659		936,572	268,794
Kansas	33,820	4,288	38,108	461,524		499,632	13,173
Kentucky	43,270,275	9,434,732	52,705,007	4,552,441	297,521	57,554,969	56,699,994
Maryland	521,880	124,622	646,502	219,386		865,888	339,810
Missouri	335,443	57,817	393,260	1,265,074		1,658,334	146,049
Montana	299,173	114,877	414,050	87,904		501,954	393,808
New Mexico	211,628	74,458	286,086	16,600		302,686	[3]
North Dakota	21,000	2,349	23,349	606,719		630,068	10,927
Ohio	8,771,181	2,624,482	11,395,663	8,886,140	355,013	20,636,816	13,432,814
Oklahoma	803,078	147,447	950,525	773,781		1,724,306	481,131
Oregon	888	888	1,776			1,776	[3]
Pennsylvania (bituminous)	59,135,772	12,119,593	71,255,365	11,992,445	78,901	83,326,711	66,486,068
South Dakota	560		560	20,630		21,190	[3]
Tennessee	6,511,152	1,531,529	8,042,681	899,505	81,716	9,023,902	6,302,435
Texas				352,866		352,866	
Utah	3,848,221	1,205,622	5,053,843			5,053,843	6,556,286
Virginia	16,253,453	3,621,964	19,875,417	820,549	221,271	20,917,237	20,301,163
Washington	508,799	198,095	706,894	11,530		718,424	[3]
West Virginia	100,916,702	23,489,757	124,406,459	4,673,218	1,651,242	130,730,919	140,563,577
Wyoming	704,510	252,999	957,509	337,474		1,294,983	1,026,835
All other [2]							605,765
Total bituminous	271,412,129	62,543,534	333,955,663	46,800,890	2,685,664	383,442,217	361,840,104
Pennsylvania (anthracite)	27,673,009	15,126,038	42,799,047	7,420,579		50,219,626	21,347,646
Grand total	299,085,138	77,669,572	376,754,710	54,221,469	2,685,664	433,661,843	383,187,750

State	Production, short tons			Tons per man-hour			
	Strip mines	Auger mines	Total	Underground mines [1]	Strip mines	Auger mines	Total
Alabama	2,244,250		12,708,904	0.83	2.10		0.93
Alaska	459,589		724,494	.66	1.91		1.13
Arizona			[3]	[3]			[3]
Arkansas	254,294		561,669	.48	1.32		.68
California	[3]		[3]		[3]		[3]
Colorado	358,517		3,290,085	.76	2.97		.83
Georgia	[3]		[3]	[3]	[3]		[3]
Illinois	19,485,468		48,559,057	1.94	3.43		2.35
Indiana	11,816,474		16,985,858	1.41	3.82		2.51
Iowa	976,121		1,244,915	.53	2.29		1.33
Kansas	866,588		879,761	.35	1.88		1.76
Kentucky	16,727,297	859,692	74,286,983	1.08	3.67	2.89	1.29
Maryland	404,297		744,107	.53	1.84		.86
Missouri	3,147,053		3,293,102	.37	2.49		1.99
Montana	445,711		839,519	.95	5.07		1.67
New Mexico	[3]		[3]	[3]	[3]		[3]
North Dakota	2,771,077		2,782,004	.47	4.57		4.42
Ohio	24,103,880	1,218,930	38,755,624	1.18	2.71	3.43	1.88
Oklahoma	1,541,846		2,022,977	.51	1.99		1.17
Oregon			[3]	[3]			[3]
Pennsylvania (bituminous)	22,721,266	148,824	89,356,158	.93	1.89	1.89	1.07
South Dakota	[3]		[3]	[3]	[3]		[3]
Tennessee	1,934,104	322,427	8,558,966	.78	2.15	3.95	.95
Texas	[3]		[3]		[3]		[3]
Utah			6,556,286	1.30			1.30
Virginia	1,810,992	441,476	22,553,631	1.02	2.21	2.00	1.08
Washington	[3]		[3]	[3]	[3]		[3]
West Virginia	12,718,920	4,831,926	158,114,423	1.13	2.72	2.93	1.21
Wyoming	1,530,869		2,557,704	1.07	4.54		1.98
All other [2]	248,270		854,335				
Total bituminous	126,567,183	7,823,275	496,230,562	1.08	2.70	2.91	1.29
Pennsylvania (anthracite)	10,868,591		32,216,237	.50	1.46		.64
Grand total	137,435,774	7,823,275	528,446,799	1.02	2.53	2.91	1.22

[1] Includes breakers, shops, yards, washeries, and dredges at Pennsylvania anthracite mines.

[2] Number of mines does not include 74 washeries, 23 dredges, and 133 surface installations (preparation plants and general repair shops).

[3] Production included in "All other."

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TABLE 82.—*Number of fatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1955*

State	Underground																				
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	From pressure bumps or bursts	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total underground
Alabama	7											2				1				10
Alaska																				
Arizona																				
Arkansas																				
California																				
Colorado	5																			5
Georgia																				
Illinois	7		2									4		2	1					16
Indiana	2																			2
Iowa																				
Kansas																				
Kentucky	33	1										11		1	4					50
Maryland																				
Missouri																				
Montana																				
New Mexico																				
North Dakota																				
Ohio	3	1										4			2					10
Oklahoma																				
Oregon																				
Pennsylvania (bituminous)	24		2									10		2		5				43
South Dakota																				
Tennessee	5	1																		6
Utah	4											1				1				6
Virginia	21											6		1	1					29
Washington																			4	4
West Virginia	64	5	4					1				23	2	4	6	7				116
Wyoming	3	1																		4
Total bituminous	178	9	8					1				61	2	10	14	14			4	301
Pennsylvania (anthracite)	27	2	4	1	1		2					6	2	2				1		48
All coal	205	11	12	1	1		2	1				67	4	12	14	14	1	1	4	349

State	Shaft and slope																			
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total shaft and slope	Total underground (including shaft and slope)
Alabama											1								1	11
Alaska																				
Arizona																				
Arkansas														1					1	1
California																				
Colorado																				5
Georgia																				
Illinois																				16
Indiana																				2
Iowa																				
Kansas																				
Kentucky																				50
Maryland																				
Missouri																				
Montana																				
New Mexico																				
North Dakota																				
Ohio																				10
Oklahoma																				
Oregon																				
Pennsylvania (bituminous)																				43
South Dakota																				
Tennessee																				6
Utah																				6
Virginia																				29
Washington																				4
West Virginia																				116
Wyoming																				4
Total bituminous											1			1					2	303
Pennsylvania (anthracite)																		1	1	49
All coal											1			1				1	3	352

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TABLE 82.—*Number of fatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1955*—Continued

State	Surface														
	Rushes, rolls, or slides	Falling materials or objects	Slips of falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total surface
Alabama																
Alaska																
Arizona																
Arkansas																
California																
Colorado																
Georgia																
Illinois								1								1
Indiana								1								1
Iowa																
Kansas																
Kentucky								3			1	2			1	7
Maryland																
Missouri																
Montana																
New Mexico																
North Dakota																
Ohio											1					1
Oklahoma																
Oregon																
Pennsylvania (bituminous)								1				2				3
South Dakota																
Tennessee																
Utah											1					1
Virginia		2						1		1	1				1	6
Washington																
West Virginia		1						9			1	1				12
Wyoming																
Total bituminous		3						16		1	5	5			2	32
Pennsylvania (anthracite)[1]								2			1				4	7
All coal		3						18		1	6	5			6	39

State	Strip															
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total strip
Alabama																	
Alaska																	
Arizona																	
Arkansas																	
California																	
Colorado					1				2								3
Georgia																	
Illinois									1				1				2
Indiana									2								2
Iowa													1				1
Kansas																	
Kentucky											1		1				2
Maryland																	
Missouri																	
Montana																	
New Mexico																	
North Dakota																	
Ohio				1					1				1				3
Oklahoma																	
Oregon																	
Pennsylvania (bituminous)		1									1		2				4
South Dakota																	
Tennessee	1															1	2
Utah																	
Virginia																	
Washington																	
West Virginia									1				2				3
Wyoming																	
Total bituminous	1	1		1	1				7		2		8			1	22
Pennsylvania (anthracite)													2			1	3
All coal	1	1		1	1				7		2		10			2	25

See footnote at end of table.

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TABLE 82.—*Number of fatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1955*—Continued

State	Auger																		Washeries	Dredges	Total all mines
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total auger			
Alabama	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	11
Alaska	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Arizona	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Arkansas	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
California	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Colorado	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8
Georgia	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Illinois	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	19
Indiana	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	5
Iowa	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1
Kansas	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Kentucky	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	59
Maryland	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Missouri	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Montana	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
New Mexico	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
North Dakota	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Ohio	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	14
Oklahoma	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Oregon	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Pennsylvania (bituminous)	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	50
South Dakota	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Tennessee	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	8
Utah	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	7
Virginia	1	----	1	----	----	----	----	----	1	----	----	----	----	----	----	----	3	----	----	38
Washington	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4
West Virginia	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	131
Wyoming	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	4
Total bituminous	1	----	1	----	----	----	----	----	1	----	----	----	----	----	----	----	3	----	----	360
Pennsylvania (anthracite)	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	1	----	60
All coal	1	----	1	----	----	----	----	----	1	----	----	----	----	----	----	----	3	1	----	420

[1] Includes shops, yards, and breakers at Pennsylvania anthracite mines.

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TABLE 83.—*Number of fatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1956*

State	Underground																		
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	From pressure bumps or bursts	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total underground
Alabama	7											1	2					1	1	12
Alaska																				
Arizona																				
Arkansas																				
California																				
Colorado	1	1																		2
Georgia																				
Illinois	8		1					1				7				2				19
Indiana																				
Iowa																				
Kansas																				
Kentucky	48	1										9	1	2	7	3		1		72
Maryland																				
Missouri																				
Montana																				
New Mexico																				
North Dakota																				
Ohio	4															2				6
Oklahoma															1					1
Oregon																				
Pennsylvania (bituminous)	28		1									12		1	2	6				50
South Dakota																				
Tennessee	6							1				2			1					10
Texas																				
Utah	2												1							3
Virginia	20	1	1									4		2	3	1				32
Washington																				
West Virginia	75		5	5				2				34	1	3		4	3			132
Wyoming												2								2
Total bituminous	199	3	8	5				4				71	5	8	14	18	3	2	1	341
Pennsylvania (anthracite)	29		2		1							5	4	1	2					44
All coal	228	3	10	5	1			4				76	9	9	16	18	3	2	1	385

State	Shaft and slope																			
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total shaft and slope	Total underground (including shaft and slope)
Alabama																				12
Alaska																				
Arizona																				
Arkansas																				
California																				
Colorado																				2
Georgia																				
Illinois																				19
Indiana																				
Iowa																				
Kansas																				
Kentucky																				72
Maryland																				
Missouri																				
Montana																				
New Mexico																				
North Dakota																				
Ohio																				6
Oklahoma																				1
Oregon																				
Pennsylvania (bituminous)																				50
South Dakota																				
Tennessee																				10
Texas																				
Utah																				3
Virginia																				32
Washington																				
West Virginia					1														1	133
Wyoming																				2
Total bituminous					1														1	342
Pennsylvania (anthracite)					1	2					1								4	48
All coal					2	2					1								5	390

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TABLE 83.—*Number of fatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1956*—Continued

State	Surface															
	Rushes, rolls or slides	Falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total surface
Alabama								1						1		2
Alaska																
Arizona																
Arkansas																
California																
Colorado																
Georgia																
Illinois																
Indiana																
Iowa																
Kansas																
Kentucky								1			2	1				4
Maryland																
Missouri																
Montana																
New Mexico																
North Dakota																
Ohio																
Oklahoma																
Oregon																
Pennsylvania (bituminous)								1								1
South Dakota																
Tennessee																
Texas																
Utah																
Virginia				2				1								3
Washington																
West Virginia			1					8			1	3				13
Wyoming																
Total bituminous			1	2				12			3	4		1		23
Pennsylvania (anthracite)[1]		1													3	4
All coal		1	1	2				12			3	4		1	3	27

State	Strip															
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total strip
Alabama													1				1
Alaska																	
Arizona																	
Arkansas																	
California																	
Colorado																	
Georgia																	
Illinois									1								1
Indiana									2			1					3
Iowa																	
Kansas																	
Kentucky									1			1					2
Maryland									1								1
Missouri																	
Montana																	
New Mexico																	
North Dakota																	
Ohio	1								1		4					1	7
Oklahoma	1								1								2
Oregon																	
Pennsylvania (bituminous)		1											1				2
South Dakota																	
Tennessee									1						1		2
Texas																	
Utah																	
Virginia	2																2
Washington																	
West Virginia									1							1	2
Wyoming																	
Total bituminous	4	1							9		4	2	2		1	2	25
Pennsylvania (anthracite)									1				1			1	3
All coal	4	1							10		4	2	3		1	3	28

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TABLE 83.—*Number of fatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1956*—Continued

State	Auger																					
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total auger	Washeries	Dredges	Total all mines
Alabama																				15
Alaska																				
Arizona																				
Arkansas																				
California																				
Colorado																				2
Georgia																				
Illinois																				20
Indiana																				3
Iowa																				
Kansas																				
Kentucky																				78
Maryland																				1
Missouri																				
Montana																				
New Mexico																				
North Dakota																				
Ohio														2			2			15
Oklahoma																				3
Oregon																				
Pennsylvania (bituminous)																				53
South Dakota																				
Tennessee																				12
Texas																				
Utah																				3
Virginia																				37
Washington																				
West Virginia																				148
Wyoming																				2
Total bituminous														2			2			392
Pennsylvania (anthracite)																		1		56
All coal														2			2	1		448

[1] Includes shops, yards, and breakers at Pennsylvania anthracite mines.

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TABLE 84.—*Number of nonfatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1955*

State	Underground																			
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	From pressure bumps or bursts	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total underground
Alabama	33	1	10			6	5	21	10	2		48			3	26			2	167
Alaska	1		4		4	2	9	10	4	1		2				2				39
Arizona																				
Arkansas	9		1				1	7				4		2		2			1	27
California																				
Colorado	17		10	2	6	4	7	21	3	1		17		1	1	15			5	110
Georgia	1																			1
Illinois	163	4	41		1	21	27	134	47	27	3	125		25	42	112			7	779
Indiana	23		7			7	7	40	10	6	1	46		7	14	33			4	205
Iowa	5		2					7	1			9				1			1	26
Kansas																				
Kentucky	392	10	67	8	2	57	41	370	117	30	14	477	2	38	80	331	1		40	2,077
Maryland	6		1				1	2		1		4	1			3				19
Missouri	6							1	1			1				1				10
Montana	2		1					6	1	1		2			1	4				18
New Mexico	1	1										2			1	1				6
North Dakota	1																			1
Ohio	50	2	18			8	26	88	13	5	2	79	2	10	14	81			5	403
Oklahoma	16		6			1	1	34	4	3	2	5		1		13			2	88
Oregon																				
Pennsylvania (bituminous)	274	16	81		3	26	94	361	83	39	11	416		18	34	312		1	18	1,787
South Dakota																				
Tennessee	44		9			5	2	46	16	1	2	54		5	9	36			4	233
Utah	24	1	24	15		8	8	29	2	3	1	20		1	2	19		1	2	160
Virginia	144	7	34	3		16	20	125	52	26	6	167		2	22	110			16	750
Washington	21		6		1	1	14	35	10	3		6				6				103
West Virginia	1,007	32	269	36	5	155	153	1,247	282	122	21	1,227	9	78	243	1,208	2	13	83	6,192
Wyoming	3	1	3	2		2	2	3	2		1	8		1		4				32
Total bituminous	2,243	75	594	66	22	319	418	2,587	658	271	64	2,719	14	189	466	2,320	3	15	190	13,233
Pennsylvania (anthracite)	170	2	132	40	75	80	334	656	197	59	9	275	5	21	23	187	2	1	22	2,290
All coal	2,413	77	726	106	97	399	752	3,243	855	330	73	2,994	19	210	489	2,507	5	16	212	15,523

State	Shaft and slope																			Total underground (including shaft and slope)
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total shaft and slope	
Alabama											1								1	168
Alaska																				39
Arizona																				
Arkansas																				27
California																				
Colorado											2								2	112
Georgia																				1
Illinois					1	3	1				1				1				7	786
Indiana																				205
Iowa																				26
Kansas																				
Kentucky	1			1	1	2	1				4								10	2,087
Maryland																				19
Missouri																				10
Montana																				18
New Mexico											1								1	7
North Dakota											1								1	2
Ohio						2					1								3	406
Oklahoma																				88
Oregon																				
Pennsylvania (bituminous)						2	1				4								7	1,794
South Dakota																				
Tennessee						1													1	234
Utah			2																2	162
Virginia																				750
Washington																				103
West Virginia					3	1	3				8			1					16	6,208
Wyoming											3								3	35
Total bituminous	1		2	1	5	11	6				26			1	1				54	13,287
Pennsylvania (anthracite)	1				3	9	4				24								41	2,331
All coal	2		2	1	8	20	10				50			1	1				95	15,618

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TABLE 84.—*Number of nonfatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1955*—Continued

State	Surface															Total surface
	Rushes, rolls, or slides	Falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	
Alabama			3	4	1			5		1		2			2	18
Alaska		1	2	9		3		2				1		1	2	21
Arizona																
Arkansas					1							1			1	3
California																
Colorado			1	6	3			7				4			3	24
Georgia																
Illinois		2	13	29	3	1	1	14			2	11			10	86
Indiana		2	4	6	1	2	1	8				1			2	27
Iowa								1								1
Kansas																
Kentucky		7	41	59	15	1		87		1	4	20		1	8	244
Maryland				1												1
Missouri																
Montana			1					1								2
New Mexico			1					1				1				3
North Dakota																
Ohio			11	15	5	4		16			1	5				57
Oklahoma					1			2				1			1	5
Oregon																
Pennsylvania (bituminous)		4	28	48	6	6	2	62			1	19		2	5	183
South Dakota																
Tennessee			3	6	1			10						3	2	25
Utah		2	5	8	4	2		9			2	10	1			43
Virginia		2	29	52	14		1	26			1	7			4	136
Washington		1	3	4	1			5						1		15
West Virginia		19	91	210	47	18	5	245		3	20	68		3	53	782
Wyoming		1						1				1				3
Total bituminous		41	236	457	103	37	10	502		5	31	152	1	11	93	1,679
Pennsylvania (anthracite) [1]		11	84	106	33	7	3	70		1	7	36			44	402
All coal		52	320	563	136	44	13	572		6	38	188	1	11	137	2,081

State	Strip															Total strip
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	
Alabama			3	3	6	3			2				6		1		24
Alaska						1	1		2				3				7
Arizona																	
Arkansas									1				1			1	3
California																	
Colorado				1	1	1					1		1				5
Georgia																	
Illinois	6	2	2	25	29	7	1	1	32		2	2	23		1	16	149
Indiana	4		2	11	26	3	2	1	16		2	1	12			6	86
Iowa				4	4		1		3				3			1	16
Kansas					3	1			2				2		1	1	10
Kentucky	2	1	2	14	23	5			17			1	20		1	7	93
Maryland																	
Missouri	2			7	7	1			6			1	3			3	30
Montana				4	2				1								7
New Mexico																	
North Dakota	1	1		2	3	1	2		3			1	4				18
Ohio	5	1	2	17	19	6	4		15		2	2	25			4	102
Oklahoma	1			4	2	1			1				4		1		14
Oregon																	
Pennsylvania (bituminous)	14		6	36	29	23	5	1	28		1	2	73	1	2	14	235
South Dakota																	
Tennessee			3	4	7	1			2				6		2	6	31
Utah																	
Virginia				1	2												3
Washington																	
West Virginia	10		4	14	20	16	2	1	11				41		2	10	131
Wyoming				2					1				1				4
Total bituminous	45	5	24	149	183	70	18	4	143		8	10	228	1	11	69	968
Pennsylvania (anthracite)	5		3	30	47	9	6		34		1		27		1	9	172
All coal	50	5	27	179	230	79	24	4	177		9	10	255	1	12	78	1,140

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TABLE 84.—*Number of nonfatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1955*—Continued

State	Auger																					Total all mines
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total auger	Washeries	Dredges	
Alabama																						210
Alaska																						67
Arizona																						
Arkansas																						33
California																						
Colorado																						141
Georgia																						1
Illinois																						1,021
Indiana																						318
Iowa																						43
Kansas																						10
Kentucky													3				3					2,427
Maryland																						20
Missouri																						40
Montana																						27
New Mexico																						10
North Dakota																						20
Ohio																						565
Oklahoma																						107
Oregon																						
Pennsylvania (bituminous)						1											1					2,213
South Dakota																						
Tennessee									1								1					291
Utah																						205
Virginia			1														1					890
Washington																						118
West Virginia	2		3	2	4	3			3				8			1	26					7,147
Wyoming																						42
Total bituminous	2		4	2	4	4			4				11			1	32					15,966
Pennsylvania (anthracite)																		13	1			2,919
All coal	2		4	2	4	4			4				11			1	32	13	1			18,885

[1] Includes shops, yards, and breakers at Pennsylvania anthracite mines.

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TABLE 85.—*Number of nonfatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1956*

State	Underground																			
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	From pressure bumps or bursts	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total underground
Alabama	26	.....	4	1	.....	4	6	26	8	5	1	49	1	1	....	20	....	....	....	152
Alaska	2	.....	2	.....	6	1	2	4	1	1	1	.....	.....	.....	.....	3	.....	.....	.....	23
Arizona	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Arkansas	13	.....	2	.....	.....	.....	1	11	4	.....	.....	2	.....	.....	.....	3	.....	.....	.....	36
California	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colorado	15	.....	7	6	4	5	12	26	8	1	.....	17	3	4	1	29	....	....	....	138
Georgia	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Illinois	140	4	46	1	1	26	45	159	32	19	4	156	....	9	32	121	1	....	10	806
Indiana	35	.....	13	.....	.....	5	15	40	15	9	.....	58	....	8	20	41	1	2	6	268
Iowa	8	.....	.....	.....	.....	.....	.....	8	.....	.....	.....	2	.....	.....	.....	3	.....	.....	.....	21
Kansas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kentucky	399	5	70	11	1	57	49	432	128	30	15	539	2	29	90	303	1	3	30	2,194
Maryland	4	1	.....	.....	.....	.....	1	.....	.....	.....	.....	3	.....	.....	1	6	.....	.....	.....	16
Missouri	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1
Montana	3	.....	2	.....	.....	.....	1	2	.....	.....	.....	4	.....	1	1	2	1	.....	.....	17
New Mexico	1	.....	1	.....	.....	1	.....	2	1	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	7
North Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	1	.....	.....	.....	.....	.....	.....	.....	1
Ohio	62	.....	11	.....	.....	8	22	89	12	5	3	55	....	6	17	64	1	....	4	359
Oklahoma	13	.....	4	.....	.....	1	2	45	5	9	1	4	.....	.....	.....	27	.....	....	2	113
Oregon	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Pennsylvania (bituminous)	264	7	73	.....	2	27	115	398	93	25	10	415	1	16	48	313	1	2	17	1,827
South Dakota	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Tennessee	57	.....	6	.....	.....	3	2	50	15	2	3	83	....	3	4	32	1	....	5	266
Texas	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Utah	28	.....	17	11	.....	9	13	22	7	4	.....	18	.....	.....	2	25	.....	.....	.....	156
Virginia	141	1	19	1	.....	7	10	109	23	19	1	129	....	7	22	83	1	1	6	580
Washington	9	.....	9	.....	1	1	12	23	9	.....	.....	8	.....	.....	1	5	.....	.....	.....	78
West Virginia	1,045	23	302	39	5	158	195	1,316	311	133	32	1,322	2	78	266	1,160	....	23	116	6,526
Wyoming	.....	.....	2	2	.....	3	1	3	.....	.....	.....	4	....	1	1	1	....	....	....	18
Total bituminous	2,266	41	590	72	20	316	504	2,765	672	262	71	2,869	9	163	506	2,242	8	31	196	13,603
Pennsylvania (anthracite)	175	1	152	35	98	90	379	745	203	71	5	289	11	17	49	185	....	....	33	2,538
All coal	2,441	42	742	107	118	406	883	3,510	875	333	76	3,158	20	180	555	2,427	8	31	229	16,141

State	Shaft and slope																			
	Falls of roof	Roof falls due to cars or machines knocking out posts	Falls of face	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Mine fires	All other	Total shaft and slope	Total underground (including shaft and slope)
Alabama	1	.....	....	.....	.....	.....	.....	....	.....	.....	2	.....	....	.....	.....	.....	.....	....	3	155
Alaska	....	.....	....	.....	.....	.....	1	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	1	24
Arizona	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Arkansas	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	36
California	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Colorado	....	.....	....	.....	.....	.....	.....	....	.....	.....	2	.....	....	.....	.....	.....	.....	....	2	140
Georgia	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Illinois	....	.....	....	.....	.....	.....	.....	....	.....	.....	2	.....	....	.....	.....	.....	.....	....	2	808
Indiana	....	.....	....	.....	.....	.....	.....	....	.....	.....	1	.....	....	.....	.....	.....	.....	....	1	269
Iowa	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	21
Kansas	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Kentucky	....	.....	....	.....	.....	4	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	4	2,198
Maryland	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	16
Missouri	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	1
Montana	1	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	1	18
New Mexico	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	1	.....	.....	....	1	8
North Dakota	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	1
Ohio	....	.....	....	.....	.....	2	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	2	361
Oklahoma	1	.....	....	.....	.....	.....	1	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	2	115
Oregon	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Pennsylvania (bituminous)	....	.....	....	.....	1	1	.....	....	.....	.....	4	.....	....	.....	1	.....	.....	....	7	1,834
South Dakota	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Tennessee	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	266
Texas	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....
Utah	....	.....	....	.....	.....	.....	1	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	1	157
Virginia	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	580
Washington	....	.....	....	.....	.....	.....	.....	....	.....	.....	3	.....	....	.....	.....	.....	.....	....	3	81
West Virginia	1	.....	....	.....	.....	3	.....	....	.....	.....	7	.....	....	1	.....	.....	.....	....	12	6,538
Wyoming	....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	.....	.....	.....	....	.....	18
Total bituminous	4	.....	....	.....	1	10	3	....	.....	.....	21	.....	....	1	2	.....	.....	....	42	13,645
Pennsylvania (anthracite)	2	.....	....	.....	16	15	7	2	2	.....	27	.....	....	2	.....	.....	.....	....	73	2,611
All coal	6	.....	....	.....	17	25	10	2	2	.....	48	.....	....	3	2	.....	.....	....	115	16,256

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TABLE 85.—*Number of nonfatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1956* —Continued

State	Surface														
	Rushes, rolls or slides	Falling materials or objects	Slips of falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total surface
Alabama		1	2	2		1		2				2			1	11
Alaska			7	8	5			5				1				26
Arizona																
Arkansas				1				1			2					4
California																
Colorado			1	1	1			8			1	2			2	16
Georgia																
Illinois		1	10	23	4		1	14			1	5			7	66
Indiana		1	7	6				3			1	1			4	23
Iowa		1		1												2
Kansas																
Kentucky		8	35	80	18	10	1	69			6	25		3	12	267
Maryland				2				1								3
Missouri																
Montana			1					3								4
New Mexico			1													1
North Dakota																
Ohio		1	6	14	2	4		11				8			4	50
Oklahoma			1		1											2
Oregon																
Pennsylvania (bituminous)		6	31	41	11	2	2	87			5	13			6	204
South Dakota																
Tennessee			5	8				8				1				22
Texas																
Utah		1	5	8	3			3				4			4	28
Virginia		2	8	19	3	2		37			3	8			2	84
Washington			2	3	1			3				1			2	12
West Virginia	2	21	107	229	53	17	6	245		1	35	69		1	47	833
Wyoming								1				1				2
Total bituminous	2	43	229	446	102	36	10	501		1	54	141		4	91	1,660
Pennsylvania (anthracite)[1]		3	57	70	17	4		58		1	5	14			197	426
All coal	2	46	286	516	119	40	10	559		2	59	155		4	288	2,086

State	Strip															
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total strip
Alabama	1			3	6	2			1		2		4			1	20
Alaska				3	6	1			5				4			3	22
Arizona																	
Arkansas				1	1												2
California																	
Colorado	1				1								1				3
Georgia																	
Illinois		1	2	32	47	11	4	1	15			3	27			14	157
Indiana	4	1		12	28	4	4		9		4	2	16		1	4	89
Iowa				1		4			1				4				10
Kansas	1			1	1	1	1						2				7
Kentucky	1		5	17	24	12	2		22			3	39			16	141
Maryland				1													1
Missouri	4		1	6	9	3			5		1	2	5			2	38
Montana				1	3								1				5
New Mexico																	
North Dakota			1	6	4				4				5				20
Ohio	2		3	15	17	4		1	11		1		26		3	5	88
Oklahoma			1	3	2							1	1				8
Oregon																	
Pennsylvania (bituminous)	11	4	4	56	48	17	1	1	27		1		63		9	14	256
South Dakota													1				1
Tennessee	1			3	3	1			3				1				12
Texas				3	1				1				2			2	9
Utah																	
Virginia				2		1	1						4			1	9
Washington																	
West Virginia	21		2	22	34	14	4	1	20		2		44		2	14	180
Wyoming					1	1			2							1	5
Total bituminous	47	6	19	188	236	76	17	4	126		11	11	250		15	77	1,083
Pennsylvania (anthracite)	7	3	7	45	72	12	2		33			1	39			14	235
All coal	54	9	26	233	308	88	19	4	159		11	12	289		15	91	1,318

See footnote at end of table.

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TABLE 85.—*Number of nonfatal injuries at coal mines in the United States, by States, general location, and principal injury agencies, 1956*—Continued

State	Auger																				
	Falls or slides of coal or overburden	Rushes, rolls, or slides	Other falling materials or objects	Slips or falls of persons	Handling materials	Handtools	Stepping or kneeling on sharp or loose objects	Striking or bumping against objects	Haulage	Explosions of gas or coal dust	Explosives	Electricity	Machinery	Suffocation	Fires	All other	Total auger	Washeries	Dredges	Total all mines
Alabama																				186
Alaska																				72
Arizona																				
Arkansas																				42
California																				
Colorado																				159
Georgia																				
Illinois																				1,031
Indiana																				381
Iowa																				33
Kansas																				7
Kentucky				2	2				2				3				9			2,615
Maryland																				20
Missouri																				39
Montana																				27
New Mexico																				9
North Dakota																				21
Ohio									2				2				4			503
Oklahoma																				125
Oregon																				
Pennsylvania (bituminous)																				2,294
South Dakota																				1
Tennessee																				300
Texas																				9
Utah																				185
Virginia													2				2			675
Washington																				93
West Virginia	3		2	4	9	6			16	4	1	1	29	1	2	5	83			7,634
Wyoming																				25
Total bituminous	3		2	6	11	6			20	4	1	1	36	1	2	5	98			16,486
Pennsylvania (anthracite)																		52	6	3,330
All coal	3		2	6	11	6			20	4	1	1	36	1	2	5	98	52	6	19,816

[1] Includes shops, yards, and breakers at Pennsylvania anthracite mines.

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TABLE 86.—*Number of injuries, by percentage distribution, average severity, and injury rates at coal mines in the United States, by States and degree of injury, 1955*

State	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3]				Frequency rates [4]			
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Per million man-hours		Per million tons		Per million man-hours		Per million tons	
		Permanent		Temporary total	Total nonfatal						Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
		Total	Partial															
Underground mines:																		
Underground (including shaft and slope):																		
Alabama	11	1	16	151	168	179	1.3	301.9	45.2	467.4	5,725.63	1,531.95	5,954.64	1,593.23	0.95	14.57	0.99	15.16
Alaska				39	39	39	.3		10.4	10.4		1,445.57		1,294.73		138.86		124.37
Arizona																		
Arkansas	1			27	27	28	.2		53.1	265.5	12,561.05	3,000.00	20,056.56	4,790.17	2.09	56.52	3.34	90.25
California																		
Colorado	5		2	110	112	117	.9	112.5	38.0	294.0	9,408.54	1,380.55	10,015.73	1,469.64	1.57	35.13	1.67	37.39
Georgia				1	1	1	(5)		92.0	92.0		3,052.02		(6)		33.17		(6)
Illinois	16	2	12	772	786	802	5.9	287.5	34.0	171.7	8,134.67	3,533.41	3,449.53	1,498.35	1.36	66.60	.57	28.24
Indiana	2		7	198	205	207	1.5	996.4	23.9	114.5	4,271.47	4,166.82	2,420.38	2,361.08	.71	72.97	.40	41.35
Iowa				26	26	26	.2		34.8	34.8		1,868.89		3,005.58		53.75		86.44
Kansas																		
Kentucky	50	5	47	2,035	2,087	2,137	15.7	621.3	36.2	202.5	7,084.43	3,136.30	5,500.57	2,435.12	1.18	49.28	.92	38.27
Maryland			1	18	19	19	.1	150.0	21.9	28.6		1,098.97		1,806.26		38.38		63.09
Missouri				10	10	10	.1		32.8	32.8		1,375.27		2,932.94		41.93		89.42
Montana				18	18	18	.1		23.7	23.7		1,311.10		939.04		55.27		39.58
New Mexico			1	6	7	7	.1	300.0	50.5	86.1		2,267.52		(6)		26.32		(6)
North Dakota				2	2	2	(5)		130.5	130.5		9,235.67		11,667.41		70.77		89.41
Ohio	10		15	391	406	416	3.1	960.0	29.5	206.6	6,791.92	2,935.47	4,752.17	2,053.89	1.13	45.96	.79	32.16
Oklahoma			1	87	88	88	.6	150.0	30.2	31.5		2,715.02		4,003.99		86.13		127.02
Oregon																		
Pennsylvania (bituminous)	43		58	1,736	1,794	1,837	13.5	561.2	44.3	200.1	4,307.78	1,828.34	3,977.39	1,688.11	.72	29.95	.66	27.66
South Dakota																		
Tennessee	6	1	5	228	234	240	1.8	360.0	34.0	214.8	6,063.89	2,620.44	7,200.00	3,111.40	1.01	39.42	1.20	46.80
Utah	6		2	160	162	168	1.2	112.5	42.9	256.5	9,845.10	1,937.57	5,774.53	1,136.46	1.64	44.30	.96	25.99
Virginia	29		17	733	750	779	5.7	292.3	32.7	260.6	9,984.18	1,662.48	8,640.04	1,438.67	1.66	43.04	1.44	37.24
Washington	4			103	103	107	.8		32.2	255.3	37,880.94	5,237.04	41,700.40	5,765.08	6.31	162.57	6.95	178.96
West Virginia	116	5	159	6,044	6,208	6,324	46.5	616.9	31.7	160.6	7,371.16	3,383.87	5,402.23	2,480.00	1.23	65.75	.90	48.19
Wyoming	4	1	4	30	35	39	.3	1,575.0	53.1	971.6	27,504.26	15,921.53	17,366.53	10,053.05	4.58	40.11	2.89	25.33
Total bituminous	303	15	347	12,925	13,287	13,590		586.8	34.5	188.2	6,807.45	2,770.24	5,288.39	2,152.07	1.13	49.75	.88	38.65
Pennsylvania (anthracite)	49		33	2,298	2,331	2,380		814.8	22.3	156.4	10,907.92	2,899.50	14,968.99	3,979.00	1.82	86.48	2.49	118.68
Total underground (including shaft and slope)	352	15	380	15,223	15,618	15,970		606.6	32.7	183.5	7,183.35	2,782.09	5,811.58	2,250.81	1.20	53.12	.97	42.98
Surface:																		
Alabama			2	16	18	18	1.1	375.0	38.8	76.2		557.97				7.33		
Alaska				21	21	21	1.2		12.2	12.2		1,552.15				127.33		
Arizona																		
Arkansas				3	3	3	.2		22.3	22.3		837.89				37.52		
California																		
Colorado			3	21	24	24	1.4	3,600.0	16.3	464.3		14,452.86				31.13		
Georgia																		
Illinois	1		2	84	86	87	5.1	225.0	23.5	96.8	1,680.87	679.35			.28	24.09		
Indiana	1		1	26	27	28	1.6	600.0	26.8	260.6	6,125.78	1,324.19			1.02	27.57		
Iowa				1	1	1	(1)		25.0	25.0		301.56				12.06		
Kansas																		
Kentucky	7	1	14	229	244	251	14.7	942.9	32.9	273.8	4,615.07	2,936.61			.77	26.81		
Maryland				1	1	1	(1)		24.0	24.0		212.21				8.84		
Missouri																		
Montana				2	2	2	.1		34.0	34.0		547.61				16.11		

See footnotes at end of table.

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TABLE 86.—*Number of injuries, by percentage distribution, average severity, and injury rates at coal mines in the United States, by States and degree of injury, 1955*—Continued

State	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3]				Frequency rates [4]			
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Per million man-hours		Per million tons		Per million man-hours		Per million tons	
		Permanent		Temporary total	Total nonfatal						Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
		Total	Partial															
Underground mines—Continued																		
Surface—Continued																		
New Mexico				3	3	3	.2		59.3	59.3		2,305.79				38.86		
North Dakota																		
Ohio	1		4	53	57	58	3.4	150.0	28.8	140.1	2,285.96	810.37			.38	21.72		
Oklahoma				5	5	5	.3		37.6	37.6		1,030.88				27.42		
Oregon																		
Pennsylvania (bituminous)	3		9	174	183	186	10.9	741.7	31.6	162.2	1,493.07	1,009.98			.25	15.18		
South Dakota																		
Tennessee			1	24	25	25	1.5	300.0	29.0	39.8		752.86				18.90		
Utah	1		2	41	43	44	2.6	2,287.5	31.8	270.0	4,447.17	4,356.75			.74	31.87		
Virginia	6		2	134	136	142	8.3	225.0	30.7	285.6	7,404.79	937.94			1.23	27.97		
Washington				15	15	15	.9		4.6	4.6		267.86				58.23		
West Virginia	12		32	750	782	794	46.4	661.7	25.8	141.7	3,393.81	1,910.76			.57	36.86		
Wyoming				3	3	3	.2		21.7	21.7		228.08				10.53		
Total bituminous	32	1	72	1,606	1,679	1,711		827.4	27.8	176.6	3,109.45	1,784.28			.52	27.19		
Pennsylvania (anthracite) [7]	8		7	409	416	424		932.1	20.1	148.0	3,734.37	1,147.77			.62	32.36		
Total surface	40	1	79	2,015	2,095	2,135		836.7	26.2	170.9	3,217.12	1,674.61			.54	28.08		
Total underground mines:																		
Bituminous coal	335	16	419	14,531	14,966	15,301		628.1	33.8	186.9	6,113.00	2,585.08	5,846.90	2,472.56	1.02	45.52	.97	43.53
Anthracite [7]	57		40	2,707	2,747	2,804		835.3	22.0	155.1	8,591.56	2,333.87	17,412.90	4,730.15	1.43	69.01	2.90	139.86
Total deep mines	392	16	459	17,238	17,713	18,105		646.2	31.9	182.0	6,380.66	2,557.95	6,471.99	2,594.57	1.06	48.05	1.08	48.74
Strip mines:																		
Alabama			1	23	24	24	2.4	150.0	40.0	44.6		993.71		546.79		22.27		12.25
Alaska				7	7	7	.7		4.0	4.0		174.67		83.27		43.67		20.82
Arizona																		
Arkansas				3	3	3	.3		35.3	35.3		518.43		401.14		14.67		11.35
California																		
Colorado	3			5	5	8	.8		25.6	2,266.0	162,059.96	1,152.43	50,182.61	356.85	27.01	45.02	8.36	13.94
Georgia																		
Illinois	2			149	149	151	15.3		22.9	102.1	2,105.34	599.15	643.61	183.16	.35	26.14	.11	7.99
Indiana	2			86	86	88	8.9		36.0	171.5	3,860.62	995.40	1,078.94	278.19	.64	27.67	.18	7.73
Iowa	1			16	16	17	1.7		15.8	367.8	13,661.54	576.06	6,127.98	258.40	2.28	36.43	1.02	16.34
Kansas			1	9	10	10	1.0	600.0	13.4	72.1		1,850.09		1,103.23		25.66		15.30
Kentucky	2		2	91	93	95	9.6	1,575.0	22.7	181.2	2,776.24	1,206.51	870.25	378.20	.46	21.52	.15	6.74
Maryland																		
Missouri				30	30	30	3.0		19.1	19.1		498.36		186.15		26.09		9.75
Montana				7	7	7	.7		21.0	21.0		1,466.58		181.28		69.84		8.63
New Mexico																		
North Dakota				18	18	18	1.8		31.5	31.5		854.71		185.20		27.13		5.88
Ohio	3		4	98	102	105	10.6	750.0	29.6	227.6	2,106.03	690.19	743.00	243.50	.35	11.93	.12	4.21
Oklahoma				14	14	14	1.4		34.9	34.9		743.95		337.98		21.34		9.70
Oregon																		
Pennsylvania (bituminous)	4	1	5	229	235	239	24.1	540.0	21.1	157.1	2,232.69	1,259.24	1,215.42	685.50	.37	21.86	.20	11.90
South Dakota																		
Tennessee	2		3	28	31	33	3.3	800.0	44.5	474.2	13,163.45	4,000.59	6,203.99	1,885.50	2.19	34.01	1.03	16.03
Utah																		
Virginia				3	3	3	.3		20.7	20.7		128.17		72.61		6.20		3.51
Washington																		

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West Virginia	3		8	123	131	134	13.5	331.3	23.1	175.3	5,153.00	1,571.66	1,839.14	560.94	.86	37.50	.31	13.38
Wyoming				4	4	4	.4		17.3	17.3		218.46		44.84		12.66		2.60
Total bituminous	22	1	24	943	968	990		610.4	25.3	178.3	3,064.48	1,033.31	1,147.28	386.85	.51	22.47	.19	8.41
Pennsylvania (anthracite)	3		8	164	172	175		1,818.8	24.5	208.9	2,908.73	2,999.87	1,933.90	1,994.49	.48	27.79	.32	18.48
Total, strip mines	25	1	32	1,107	1,140	1,165		912.5	25.2	182.9	3,044.91	1,280.35	1,206.15	507.17	.51	23.14	.20	9.17
Auger mines:																		
Kentucky			1	2	3	3	8.6	150.0	37.0	74.7		676.49		271.20		9.06		3.63
Ohio																		
Pennsylvania				1	1	1	2.9		3.0	3.0		35.88		24.17		11.96		8.06
Tennessee				1	1	1	2.9		8.0	8.0		330.25		244.11		41.28		30.51
Virginia				1	1	1	2.9		37.0	37.0		414.67		246.65		11.21		6.67
West Virginia	3		2	24	26	29	82.9	112.5	11.1	637.7	19,557.67	534.58	7,679.52	209.91	3.26	28.25	1.28	11.09
Total auger	3		3	29	32	35		125.0	13.4	536.1	11,983.35	508.63	4,874.85	206.91	2.00	21.30	.81	8.67
Total:																		
Alabama	11	1	19	190	210	221	1.4	301.6	44.1	389.6	4,381.87	1,334.55	5,060.38	1,541.19	.73	13.94	.84	16.10
Alaska				67	67	67	.4		10.3	10.3		1,138.45		1,061.79		110.54		103.10
Arizona																		
Arkansas	1			33	33	34	.2		48.7	223.7	7,873.05	2,107.35	10,649.57	2,850.54	1.31	43.30	1.77	58.57
California																		
Colorado	8		5	136	141	149	.9	2,205.0	34.2	427.3	11,791.93	3,850.06	14,311.36	4,672.66	1.97	34.64	2.39	42.04
Georgia				1	1	1	(5)		92.0	92.0		2,658.34		(6)		28.90		(6)
Illinois	19	2	14	1,005	1,021	1,040	6.4	278.6	31.5	155.3	5,410.35	2,256.16	2,452.94	1,022.90	.90	48.46	.41	21.97
Indiana	5		8	310	318	323	2.0	946.9	27.5	142.7	4,349.64	2,333.87	1,865.68	1,001.06	.72	46.11	.31	19.78
Iowa	1			43	43	44	.3		27.5	163.2	5,965.40	1,175.18	4,687.90	923.52	.99	42.75	.78	33.60
Kansas			1	9	10	10	.1	600.0	13.4	72.1		1,680.37		1,078.31		23.31		14.96
Kentucky	59	6	64	2,357	2,427	2,486	15.2	714.1	35.3	208.8	6,310.10	2,940.70	5,118.95	2,385.59	1.05	43.26	.85	35.10
Maryland			1	19	20	20	.1	150.0	22.0	28.4		750.50		1,079.88		26.43		38.02
Missouri				40	40	40	.2		22.5	22.5		624.63		282.45		27.73		12.54
Montana				27	27	27	.2		23.8	23.8		1,167.08		507.26		49.08		21.33
New Mexico			1	9	10	10	.1	300.0	53.4	78.1		2,160.10		(6)		27.66		(6)
North Dakota				20	20	20	.1		41.4	41.4		1,191.23		268.49		28.77		6.49
Ohio	14		23	542	565	579	3.5	782.6	29.4	203.7	4,187.61	1,692.89	2,266.13	916.11	.70	28.17	.38	15.24
Oklahoma			1	106	107	107	.7	150.0	31.1	32.2		1,854.79		1,614.65		57.53		50.08
Oregon																		
Pennsylvania (bituminous)	50	1	72	2,140	2,213	2,263	13.9	582.3	40.8	192.3	3,624.05	1,633.44	3,540.36	1,595.72	.60	26.73	.59	26.12
South Dakota																		
Tennessee	8	1	9	281	291	299	1.8	500.0	34.5	228.1	5,856.82	2,465.72	6,889.61	2,900.53	.98	35.51	1.15	41.77
Utah	7		4	201	205	212	1.3	1,200.0	40.6	259.3	8,390.25	2,589.59	6,736.96	2,079.31	1.40	40.95	1.12	32.88
Virginia	35		19	871	890	925	5.7	285.2	32.4	263.4	9,185.45	1,471.07	9,932.50	1,590.71	1.53	38.93	1.66	42.09
Washington	4			118	118	122	.7		28.7	224.5	26,534.99	3,744.75	38,546.35	5,439.85	4.42	130.46	6.42	189.52
West Virginia	134	5	201	6,941	7,147	7,281	44.6	607.6	30.8	160.7	6,697.18	3,048.97	5,703.48	2,596.58	1.12	59.53	.95	50.70
Wyoming	4	1	4	37	42	46	.3	1,575.0	46.7	826.7	16,288.54	9,519.97	8,217.34	4,802.69	2.71	28.50	1.37	14.38
Total bituminous	360	17	446	15,503	15,966	16,326		623.8	33.2	187.1	5,784.93	2,397.71	4,670.07	1,935.63	.96	42.76	.78	34.52
Pennsylvania (anthracite)	60		48	2,871	2,919	2,979		999.2	22.1	158.3	7,826.98	2,423.47	12,435.99	3,850.56	1.30	63.46	2.07	101.18
Total all mines	420	17	494	18,374	18,885	19,305		660.3	31.5	182.7	6,008.89	2,400.54	5,127.50	2,048.43	1.00	45.03	.85	38.43

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Less than 0.05 percent.

[6] Production included in "all other" in table 80.

[7] Includes injury data for washeries and dredges.

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TABLE 87.—*Numbers of injuries, by percentage distribution, average severity, and injury rates at coal mines in the United States, by States and degree of injury, 1956*

State	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3]				Frequency rates [4]			
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Per million man-hours		Per million tons		Per million man-hours		Per million tons	
		Permanent		Temporary total	Total nonfatal						Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
		Total	Partial															
Underground mines:																		
Underground (including shaft and slope):																		
Alabama	12	2	11	142	155	167	1.2	576.8	45.8	579.9	6,954.75	2,399.58	6,880.30	2,373.90	1.16	14.97	1.15	14.81
Alaska				24	24	24	.2		22.9	22.9		2,371.70		2,072.44		103.68		90.60
Arizona																		
Arkansas				36	36	36	.3		25.5	25.5		1,643.85		2,989.83		64.39		117.12
California																		
Colorado	2		5	135	140	142	1.0	1,200.0	39.7	164.5	3,834.76	3,630.88	4,093.37	3,875.74	.64	44.74	.68	47.76
Georgia																		
Illinois	19		13	795	808	827	5.9	767.3	32.0	180.7	9,753.55	3,033.18	3,921.08	1,219.39	1.63	69.13	.65	27.79
Indiana			4	265	269	269	1.9	1,593.8	34.8	58.0		5,515.22		3,017.96		95.10		52.04
Iowa				21	21	21	.2		29.7	29.7		1,410.58		2,317.76		47.55		78.13
Kansas																		
Kentucky	72	3	56	2,139	2,198	2,270	16.2	613.6	31.2	242.8	9,983.76	2,751.45	7,619.05	2,099.75	1.66	50.80	1.27	38.77
Maryland			1	15	16	16	.1	150.0	32.9	40.3		1,234.00		1,895.18		30.66		47.09
Missouri				1	1	1	(5)		256.0	256.0		763.17		1,752.84		2.98		6.85
Montana				18	18	18	.1		25.8	25.8		1,554.28		1,180.78		60.17		45.71
New Mexico				8	8	8	.1		29.9	29.9		1,129.34		(6)		37.80		(6)
North Dakota				1	1	1	(5)		35.0	35.0		1,666.67		3,203.07		47.62		91.52
Ohio	6	1	11	349	361	367	2.6	811.4	33.5	170.6	4,104.35	3,034.60	2,680.00	1,981.49	.68	41.16	.45	26.87
Oklahoma	1		3	112	115	116	.8	1,050.0	23.8	101.9	7,471.25	7,240.89	12,470.62	12,086.11	1.25	143.20	2.08	239.02
Oregon																		
Pennsylvania (bituminous)	50		62	1,772	1,834	1,884	13.5	695.4	39.4	219.2	5,073.07	1,908.93	4,512.22	1,697.89	.85	31.01	.75	27.58
South Dakota																		
Tennessee	10	1	3	262	266	276	2.0	250.0	29.1	269.5	9,214.96	2,207.29	9,520.13	2,280.39	1.54	40.85	1.59	42.21
Utah	3		6	151	157	160	1.1	1,475.0	37.4	203.1	4,677.49	3,768.49	2,745.46	2,211.92	.78	40.80	.46	23.95
Virginia	32	1	14	565	580	612	4.4	1,157.1	33.1	380.5	11,812.87	2,516.14	9,457.59	2,014.47	1.97	35.68	1.58	28.57
Washington			1	80	81	81	.6	1,800.0	31.4	53.2		8,476.82		(6)		159.20		(6)
West Virginia	133	2	145	6,391	6,538	6,671	47.7	501.5	29.3	160.4	7,907.51	2,697.60	5,677.15	1,936.75	1.32	64.79	.95	46.51
Wyoming	2		5	13	18	20	.1	1,245.0	38.0	936.0	17,033.12	9,537.13	11,686.40	6,543.41	2.84	25.55	1.95	17.53
Total bituminous	342	10	340	13,295	13,645	13,987		661.6	31.9	197.4	7,560.46	2,610.04	5,671.01	1,957.76	1.26	50.27	.95	37.71
Pennsylvania (anthracite)	48	2	37	2,572	2,611	2,659		1,050.0	25.3	151.9	10,407.25	4,192.68	13,490.95	5,434.98	1.73	94.35	2.25	122.31
Total underground (including shaft and slope)	390	12	377	15,867	16,256	16,646		699.7	30.8	190.1	7,823.86	2,756.47	6,106.67	2,151.48	1.30	54.35	1.02	42.42
Surface:																		
Alabama	2		1	10	11	13	.8	75.0	33.5	954.6	5,183.04	177.09			.86	4.75		
Alaska				26	26	26	1.5		13.8	13.8		2,124.04				153.40		
Arizona																		
Arkansas				4	4	4	.2		19.3	19.3		1,012.61				52.60		
California																		
Colorado				16	16	16	1.0		19.7	19.7		439.86				22.34		
Georgia																		
Illinois			1	65	66	66	3.9	1,800.0	17.4	44.5		880.31				19.80		
Indiana				23	23	23	1.4		23.2	23.2		628.01				27.10		
Iowa				2	2	2	.1		9.0	9.0		263.73				29.30		
Kansas																		
Kentucky	4		6	261	267	271	16.1	712.50	28.9	132.1	2,543.79	1,251.86			.42	28.30		
Maryland				3	3	3	.2		19.7	19.7		473.43				24.07		
Missouri																		
Montana				4	4	4	.2		35.8	35.8		1,244.81				34.82		
New Mexico				1	1	1	.1		13.0	13.0		174.60				13.43		

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North Dakota				50	50	50	3.0		33.4	33.4		635.94				19.05		
Ohio				2	2	2	.1		33.0	33.0		447.62				13.56		
Oklahoma																		
Oregon																		
Pennsylvania (bituminous)	1		10	194	204	205	12.2	217.5	33.0	71.1	495.07	707.86			.08	16.83		
South Dakota																		
Tennessee				22	22	22	1.3		29.6	29.6		425.72				14.36		
Utah		1	2	25	28	28	1.7	1,700.0	14.1	348.3		8,088.77				23.22		
Virginia	3		6	78	84	87	5.2	375.0	27.2	257.2	4,969.68	1,207.63			.83	23.19		
Washington			1	11	12	12	.7	150.0	31.7	41.6		2,518.99				60.58		
West Virginia	13		19	814	833	846	50.3	446.6	23.2	124.5	3,320.60	1,164.55			.55	35.46		
Wyoming				2	2	2	.1		2.5	2.5		19.76				7.91		
Total bituminous	23	1	46	1,613	1,660	1,683		491.5	25.4	123.4	2,206.46	1,113.21			.37	26.54		
Pennsylvania (anthracite)[7]	5		5	479	484	489		900.0	25.5	95.5	1,983.33	1,104.78			.33	32.00		
Total surface	28	1	51	2,092	2,144	2,172		531.6	25.4	117.1	2,163.01	1,111.57			.36	27.60		
Total underground mines:																		
Bituminous coal	365	11	386	14,908	15,305	15,670		641.3	31.2	189.4	6,557.76	2,329.71	6,052.40	2,150.18	1.09	45.83	1.01	42.30
Anthracite [7]	53	2	42	3,051	3,095	3,148		1,032.2	25.4	143.2	7,430.07	3,101.35	14,896.26	6,217.78	1.24	72.31	2.48	144.98
Total deep mines	418	13	428	17,959	18,400	18,818		679.7	30.2	181.7	6,656.85	2,417.37	6,545.09	2,376.79	1.11	48.84	1.09	48.02
Strip mines:																		
Alabama	1			20	20	21	1.9		48.4	331.8	5,602.97	903.01	2,673.50	430.88	0.93	18.68	.45	8.91
Alaska				22	22	22	2.0		12.3	12.3		1,124.35		589.66		91.28		47.87
Arizona																		
Arkansas				2	2	2	.2		76.0	76.0		789.61		597.73		10.39		7.86
California																		
Colorado				3	3	3	.3		10.3	10.3		257.05		84.47		24.88		8.37
Georgia																		
Illinois	1		3	154	157	158	14.3	325.0	21.7	65.3	1,057.70	762.08	307.92	221.86	.18	27.68	.05	8.06
Indiana	3		1	88	89	92	8.3	300.0	34.4	231.8	5,818.14	1,076.03	1,523.30	281.73	.97	28.77	.25	7.53
Iowa			1	9	10	10	.9	3,600.0	4.3	363.9		8,529.06		3,728.02		23.44		10.24
Kansas				7	7	7	.6		15.6	15.6		236.17		125.78		15.17		8.08
Kentucky	2		4	137	141	143	12.9	1,387.5	25.3	147.0	2,635.95	1,981.57	717.39	539.30	.44	30.97	.12	8.43
Maryland	1			1	1	2	.2		6.0	3,003.0	27,349.06	27.35	14,840.58	14.84	4.56	4.56	2.47	2.47
Missouri			1	37	38	38	3.4	300.0	25.9	33.2		995.99		400.37		30.04		12.07
Montana				5	5	5	.5		18.8	18.8		1,069.35		210.90		56.88		11.22
New Mexico																		
North Dakota			2	18	20	20	1.8	1,575.0	41.3	194.7		6,418.13		1,405.23		32.96		7.22
Ohio	7	1	4	83	88	95	8.6	600.0	37.7	563.5	4,726.46	1,297.75	1,742.46	478.43	.79	9.90	.29	3.65
Oklahoma	2		1	7	8	10	.9	300.0	11.1	1,237.8	15,508.26	488.51	7,782.88	245.16	2.58	10.34	1.30	5.19
Oregon																		
Pennsylvania (bituminous)	2		3	253	256	258	23.3	400.0	26.9	77.5	1,000.63	667.17	528.14	352.14	.17	21.35	.09	11.27
South Dakota				1	1	1	.1		35.0	35.0		1,696.56		(6)		48.47		(6)
Tennessee	2		2	10	12	14	1.3	1,370.0	24.8	1,070.6	13,340.67	3,321.83	6,204.42	1,544.90	2.22	13.34	1.03	6.20
Texas			1	8	9	9	.8	900.0	12.4	111.0		2,831.10		(6)		25.51		(6)
Utah																		
Virginia	2			9	9	11	1.0		19.1	1,106.5	14,624.36	209.62	6,626.20	94.98	2.44	10.97	1.10	4.97
Washington																		
West Virginia	2		5	175	180	182	16.4	1,320.0	24.4	125.7	2,567.82	2,327.52	943.48	855.18	.43	38.52	.16	14.15
Wyoming				5	5	5	.5		26.8	26.8		397.07		87.53		14.82		3.27
Total bituminous	25	1	28	1,054	1,083	1,108		1,000.5	26.8	191.5	3,205.07	1,329.29	1,185.14	491.53	.53	23.14	.20	8.56
Pennsylvania (anthracite)	3		4	231	235	238		525.0	28.9	112.5	2,425.69	1,182.52	1,656.15	807.37	.40	31.67	.28	21.62
Total strip mines	28	1	32	1,285	1,318	1,346		941.1	27.1	177.6	3,098.40	1,309.20	1,222.39	516.51	.52	24.31	.20	9.59
Auger mines:																		
Kentucky			1	8	9	9	9.0	75.0	15.9	22.4		678.94		234.97		30.25		10.47
Ohio	2			4	4	6	6.0		26.5	2,017.7	33,801.58	298.58	9,844.70	86.96	5.63	11.27	1.64	3.28
Pennsylvania																		
Tennessee																		
Virginia				2	2	2	2.0		13.5	13.5		122.02		61.16		9.04		4.53
West Virginia			1	82	83	83	83.0	300.0	13.7	17.2		863.59		295.12		50.27		17.18
Total auger mines	2		2	96	98	100		187.5	14.4	137.6	4,468.17	655.70	1,533.88	225.10	.74	36.49	.26	12.53

See footnotes at end of table.

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TABLE 87.—*Number of injuries, by percentage distribution, average severity, and injury rates at coal mines in the United States, by States and degree of injury, 1956*—Continued.

State	Number of injuries						Distribution of all injuries, percent [1]	Average severity [2]			Time-loss rates [3]				Frequency rates [4]			
	Fatal	Nonfatal				All injuries		Permanent partial	Temporary total	All injuries	Per million man-hours		Per million tons		Per million man-hours		Per million tons	
		Permanent		Temporary total	Total nonfatal						Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal	Fatal	Nonfatal
		Total	Partial															
Total:																		
Alabama	15	2		12	172	186	201	1.2	535.0	45.3	578.2	6,550.82	1,908.40	7,081.65	2,063.04	1.09	13.54	1.18	14.64
Alaska					72	72	72	.4		16.4	16.4		1,838.02		1,628.72		112.15		99.38
Arizona																			
Arkansas					42	42	42	.2		27.3	27.3		1,387.16		2,043.91		50.75		74.78
California																			
Colorado	2			5	154	159	161	1.0	1,200.0	37.1	147.3	3,025.71	2,952.08	3,647.32	3,558.57	.50	40.09	.61	48.33
Georgia																			
Illinois	20			17	1,014	1,031	1,051	6.2	750.0	29.5	154.8	5,798.88	2,063.87	2,471.22	879.53	.97	49.82	.41	21.23
Indiana	3			5	376	381	384	2.3	1,335.0	34.0	97.6	2,658.32	2,874.38	1,059.71	1,145.84	.44	56.27	.18	22.43
Iowa				1	32	33	33	.2	3,600.0	21.3	129.7		4,569.96		3,437.99		35.23		26.51
Kansas					7	7	7	(5)		15.6	15.6		218.16		123.90		14.01		7.96
Kentucky	78	3		67	2,545	2,615	2,693	16.0	660.6	30.6	225.8	8,131.36	2,434.02	6,260.89	1,885.79	1.36	45.43	1.05	35.20
Maryland	1			1	19	20	21	.1	150.0	29.4	319.5	6,929.30	818.81	8,063.36	952.82	1.15	23.10	1.34	26.88
Missouri				1	38	39	39	.2	300.0	32.0	38.9		914.17		460.36		23.52		11.84
Montana					27	27	27	.2		26.0	26.0		1,398.53		836.19		53.79		32.16
New Mexico					9	9	9	.1		28.0	28.0		832.55		(6)		29.73		(6)
North Dakota				2	19	21	21	.1	1,575.0	41.0	187.1		6,235.83		1,412.29		33.33		7.55
Ohio	15	2		15	486	503	518	3.1	755.0	34.2	250.8	4,361.14	1,934.60	2,322.24	1,030.15	.73	24.37	.39	12.98
Oklahoma	3			4	121	125	128	.8	862.5	23.2	189.5	10,438.98	3,629.87	8,897.78	3,093.96	1.74	72.49	1.48	61.79
Oregon																			
Pennsylvania (bituminus)	53			75	2,219	2,294	2,347	13.9	619.8	37.4	190.7	3,816.30	1,553.72	3,558.79	1,448.88	.64	27.53	.59	25.67
South Dakota					1	1	1	(5)		35.0	35.0		1,651.72		(6)		47.19		(6)
Tennessee	12	1		5	294	300	312	1.8	698.0	29.0	288.5	7,978.81	1,996.03	8,412.23	2,104.46	1.33	33.25	1.40	35.05
Texas				1	8	9	9	.1	900.0	12.4	111.0		2,831.10		(6)		25.51		(6)
Utah	3	1		8	176	185	188	1.1	1,531.3	34.1	224.8	3,561.65	4,799.12	2,745.46	3,699.35	.59	36.61	.46	28.22
Virginia	37	1		20	654	675	712	4.2	922.5	32.1	375.7	10,613.26	2,173.76	9,843.20	2,016.04	1.77	32.27	1.64	29.93
Washington				2	91	93	93	.6	975.0	31.5	51.7		6,697.99		(6)		129.45		(6)
West Virginia	148	2		170	7,462	7,634	7,782	46.1	518.2	28.4	154.2	6,792.58	2,385.75	5,616.19	1,972.57	1.13	58.39	.94	48.28
Wyoming	2			5	20	25	27	.2	1,245.0	31.7	698.4	9,266.53	5,295.82	4,691.71	2,681.31	1.54	19.31	.78	9.77
Total bituminous	392	12		416	16,058	16,486	16,878		663.3	30.8	189.2	6,133.91	2,195.88	4,739.73	1,696.78	1.02	42.99	.79	33.22
Pennsylvania (anthracite)	56	2		46	3,282	3,330	3,386		988.1	25.6	141.0	6,660.61	2,817.82	10,429.52	4,392.51	1.12	66.31	1.74	103.36
Total all mines	448	14		462	19,340	19,816	20,264		695.6	29.9	181.2	6,198.38	2,267.90	5,086.60	1,861.12	1.03	45.69	.85	37.50

[1] All percentages are calculated separately, and total percentages may differ slightly from the sums of the component percentages.

[2] A standard time-loss charge of 6,000 days is made against all fatal and permanent total injuries.

[3] Number of days charged per million man-hours.

[4] Number of injuries per million man-hours.

[5] Less than 0.05 percent.

[6] Production included in "All other" in table 81.

[7] Includes injury data for washeries and dredges.

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MAJOR DISASTERS, 1947–56

A major disaster, as defined for the mineral industries, is a single accident in which five or more employees lose their lives. Four of the last 10 years have been disaster free in the coal-mining industry. The year 1949 was the first in the history of the Bureau in which no major disaster occurred at bituminous-coal, lignite, or anthracite mines. The second was 1950, and the other years were those covered by this report—1955 and 1956.

In the last 5 years shown in the table, 1952–56, 4 major disasters killed 32 men; whereas in the 5-year period, 1947–51, 17 disasters resulted in 385 deaths.

TABLE 88.—*Major disasters*[1] *at coal mines in the United States, 1947–56*

Date	Mine name	Location of mine	Cause	Number killed
1947:				
Jan. 15	Nottingham[2]	Plymouth, Pa	Explosion	15
Mar. 25	No. 5	Centralia, Ill	do	111
Apr. 10	Schooley[2]	Wyoming, Pa	do	10
Apr. 30	Spring Hill	Terre Haute, Ind	do	8
July 24	Old Ben No. 8	West Frankfort, Ill	do	27
Dec. 11	Franklin[2]	Wilkes-Barre, Pa	do	8
1948:				
Feb. 8	Sun Excelsior	Excelsior, Ark	do	8
May 20	No. 2	Dante, Va	Fall of face (bump)	6
July 27	King	Princeton, Ind	Explosion	13
July 30	Edgewater	Birmingham, Ala	do	11
Aug. 6	No. 11 Berwind	Capels, W. Va	Fall of roof	6
Nov. 4	Nethken	Kitzmiller, Md	Suffocation	5
1949: None				
1950: None				
1951:				
Jan. 18	Burning Springs	Kermit, W. Va	Explosion	11
Mar. 29	Buttonwood[2]	Wilkes-Barre, Pa	do	5
Oct. 15	Bunker	Cassville, W. Va	do	10
Oct. 31	United Gas No. 1	United, W. Va	do	12
Dec. 21	Orient No. 2	West Frankfort, Ill	do	119
1952:				
Feb. 2	Carpentertown	Mt. Pleasant, Pa	do	6
Mar. 27	Holmes Slope[2]	Minersville, Pa	Inrush of water	5
1953: Mar. 30	O'Brien	Lovilia, Iowa	Explosion	5
1954: Nov. 13	Jamison No. 9	Farmington, W. Va	do	[3] 16
1955: None				
1956: None				

[1] A single accident in which 5 men or more are killed.
[2] Pennsylvania anthracite mines.
[3] Includes 1 on the surface.

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HISTORICAL COAL-MINE-FATALITY EXPERIENCE

Historical data on coal-mine fatalities, from the earliest records through 1956, are presented in tables 89 to 93, inclusive. Figures for 1906 to 1909 include only States that recorded and maintained records of fatalities. Before 1906 coverage of the industry was less complete, but from 1910 to the present time the records represent the entire coal industry.

The largest number of men killed at bituminous-coal mines during any year was 2,534 in 1907, when 869 died as the result of 11 major disasters caused by explosions of gas or coal dust or a combination of both. The leading cause of fatalities in the statistical history of the industry has been falls of roof and face; the second cause has been haulage injuries, except in years when one or more gas or dust explosions killed a large number of men.

The largest number of men killed in the Pennsylvania anthracite industry during any year was 708 in 1907. As in the bituminous-coal industry, falls of roof and face have killed more men than any other agency, and haulage accidents have been the second highest cause.

TABLE 89.—*Coal-mine-fatality rates for the United States, 1870–1956* [1]

[Includes underground and surface injuries]

Year	Bituminous-coal mines			Anthracite mines			Total		
	Per thousand employed	Per thousand 300-day workers	Per million tons mined	Per thousand employed	Per thousand 300-day workers	Per million tons mined	Per thousand employed	Per thousand 300-day workers	Per million tons mined
1870				5. 93		13. 47	5. 93		13. 47
1871				5. 60		10. 86	5. 60		10. 86
1872				4. 98		9. 20	4. 98		9. 20
1873				5. 46		10. 06	5. 46		10. 06
1874	2. 11		8. 88	4. 33		9. 31	3. 87		9. 26
1875	1. 60		4. 93	3. 37		10. 50	3. 06		9. 51
Average				4. 58		9. 94	4. 30		9. 72
1876	1. 00		4. 29	3. 22		9. 96	2. 83		9. 20
1877	2. 17		5. 90	2. 90		7. 56	2. 77		7. 28
1878	1. 86		3. 17	2. 92		8. 62	2. 62		6. 38
1879	2. 02		3. 39	3. 81		8. 67	3. 30		6. 82
1880	1. 43		2. 95	2. 75		7. 05	2. 21		5. 16
Average	1. 66		3. 42	3. 12		8. 31	2. 72		6. 68
1881	1. 67		2. 75	3. 59	4. 87	8. 55	2. 93		6. 04
1882	1. 95		3. 63	3. 54	4. 87	8. 29	2. 75		5. 72
1883	3. 09		4. 99	3. 53	4. 56	8. 40	3. 34		6. 58
1884	2. 26		4. 11	3. 28	5. 12	8. 94	2. 80		6. 17
1885	1. 68		3. 48	3. 58	5. 26	9. 36	2. 58		5. 91
Average	2. 12		3. 88	3. 50	4. 94	8. 72	2. 85		6. 09
1886	1. 85		3. 89	2. 70	4. 13	7. 12	2. 25		5. 23
1887	1. 55		3. 08	2. 95	4. 25	7. 46	2. 20		4. 86
1888	2. 23		4. 38	2. 98	4. 10	7. 81	2. 55		5. 61
1889	1. 77		3. 44	3. 11	4. 81	8. 45	2. 36		5. 22
1890	2. 15	2. 85	3. 56	3. 00	4. 50	8. 13	2. 52	3. 50	5. 01
Average	1. 94		3. 68	2. 96	4. 36	7. 82	2. 39		5. 19

See footnote at end of table.

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TABLE 89.—*Coal-mine-fatality rates for the United States, 1870–1956* [1]—Continued

[Includes underground and surface injuries]

Year	Bituminous-coal mines			Anthracite mines			Total		
	Per thousand employed	Per thousand 300-day workers	Per million tons mined	Per thousand employed	Per thousand 300-day workers	Per million tons mined	Per thousand employed	Per thousand 300-day workers	Per million tons mined
1891	2.86	3.85	4.94	3.39	5.01	8.45	3.08	4.30	6.06
1892	3.05	4.17	5.06	3.24	4.91	7.97	3.12	4.42	5.98
1893	2.26	3.32	4.07	3.42	5.21	8.43	2.70	4.03	5.39
1894	2.26	3.96	4.65	3.38	5.34	8.57	2.67	4.50	5.91
1895	3.09	4.78	5.46	2.95	4.51	7.26	3.04	4.68	6.00
Average	2.69	4.02	4.84	3.27	4.99	8.12	2.91	4.38	5.87
1896	2.51	3.92	4.45	3.36	5.79	9.22	2.85	4.62	5.85
1897	2.38	3.64	3.99	2.82	5.64	8.04	2.55	4.27	5.08
1898	2.64	3.75	4.06	2.82	5.57	7.70	2.71	4.28	4.97
1899	3.05	3.91	4.25	3.30	5.72	7.63	3.14	4.40	5.08
1900	3.74	4.79	5.32	2.85	5.15	7.16	3.44	4.87	5.72
Average	2.90	4.06	4.46	3.03	5.58	7.94	2.95	4.50	5.34
1901	3.16	4.21	4.74	3.53	5.40	7.60	3.27	4.54	5.40
1902	3.93	5.13	5.58	2.03	5.25	7.25	3.38	5.15	5.81
1903	3.47	4.63	5.07	3.44	5.01	6.94	3.46	4.72	5.47
1904	3.35	4.98	5.26	3.82	5.73	8.13	3.48	5.17	5.88
1905	3.53	5.02	5.14	3.89	5.43	8.29	3.63	5.14	5.78
Average	3.49	4.81	5.17	3.36	5.38	7.69	3.45	4.95	5.67
1906	3.38	4.76	4.72	3.43	5.28	7.81	3.39	4.87	5.27
1907	4.99	6.40	6.46	4.23	5.77	8.27	4.81	6.25	6.78
1908	3.50	5.44	5.42	3.89	5.84	8.14	3.60	5.54	5.97
1909	4.15	5.58	5.46	3.40	4.79	6.99	3.96	5.35	5.73
1910	4.00	5.53	5.32	3.55	4.65	7.11	3.89	5.30	5.62
Average	4.01	5.57	5.50	3.70	5.25	7.67	3.94	5.48	5.89
1911	3.53	5.02	4.82	4.02	4.90	7.73	3.65	4.97	5.35
1912	3.31	4.46	4.04	3.45	4.48	7.12	3.35	4.46	4.53
1913	3.79	4.90	4.53	3.52	4.10	6.75	3.73	4.70	4.89
1914	3.19	4.90	4.40	3.31	4.05	6.55	3.22	4.66	4.78
1915	3.02	4.47	3.80	3.32	4.33	6.58	3.09	4.44	4.27
Average	3.27	4.75	4.31	3.52	4.37	6.95	3.40	4.65	4.76
1916	2.98	3.88	3.33	3.47	4.11	6.34	3.09	3.93	3.77
1917	3.50	4.33	3.83	3.77	3.98	5.84	3.56	4.25	4.14
1918	3.30	3.97	3.50	3.75	3.83	5.58	3.38	3.94	3.80
1919	2.71	4.16	3.62	4.11	4.64	7.21	2.99	4.28	4.19
1920	2.78	3.79	3.13	3.38	3.74	5.48	2.90	3.78	3.45
Average	3.05	4.03	3.48	3.70	4.06	6.07	3.18	4.03	3.86
1921	2.18	4.38	3.48	3.43	3.80	6.05	2.42	4.20	3.94
1922	2.45	5.16	3.99	1.91	3.81	5.49	2.35	4.90	4.16
1923	2.77	4.65	3.46	3.23	3.62	5.45	2.85	4.39	3.74
1924	3.08	5.39	3.94	3.10	3.39	5.64	3.08	4.80	4.20
1925	3.12	4.79	3.53	2.50	4.12	6.47	2.98	4.65	3.84
Average	2.70	4.87	3.67	2.83	3.71	5.80	2.73	4.58	3.96

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TABLE 89.—*Coal-mine-fatality rates for the United States, 1870–1956* [1]—Continued

[Includes underground and surface injuries]

Year	Bituminous-coal mines			Anthracite mines			Total		
	Per thousand employed	Per thousand 300-day workers	Per million tons mined	Per thousand employed	Per thousand 300-day workers	Per million tons mined	Per thousand employed	Per thousand 300-day workers	Per million tons mined
1926	3.48	4.86	3.60	2.74	3.37	5.36	3.32	4.50	3.83
1927	2.93	4.60	3.36	2.96	3.94	6.11	2.94	4.43	3.73
1928	3.31	4.90	3.45	2.78	3.85	5.93	3.19	4.64	3.78
1929	3.39	4.63	3.19	3.18	4.24	6.53	3.34	4.54	3.59
1930	3.28	5.26	3.46	2.94	4.22	6.40	3.20	5.00	3.84
Average	3.27	4.84	3.42	2.92	3.90	6.04	3.19	4.61	3.75
1931	2.40	4.42	2.83	2.75	4.43	6.42	2.48	4.42	3.31
1932	2.36	4.85	3.09	2.05	3.83	4.99	2.29	4.60	3.36
1933	1.99	3.58	2.50	2.21	3.58	4.66	2.03	3.58	2.78
1934	2.09	3.52	2.67	2.47	3.61	4.69	2.16	3.54	2.94
1935	2.09	3.53	2.60	2.66	4.26	5.24	2.20	3.67	2.92
Average	2.18	3.93	2.73	2.44	3.96	5.23	2.24	3.93	3.06
1936	2.28	3.46	2.52	2.39	3.73	4.46	2.30	3.50	2.73
1937	2.44	3.74	2.68	2.17	3.44	4.15	2.40	3.69	2.83
1938	1.98	3.68	2.52	2.34	4.08	4.88	2.04	3.76	2.79
1939	1.95	3.29	2.19	2.24	3.61	4.11	2.00	3.35	2.41
1940	2.73	4.07	2.61	1.99	3.16	3.57	2.60	3.92	2.71
Average	2.28	3.65	2.51	2.23	3.60	4.23	2.27	3.64	2.70
1941	2.34	3.28	2.08	2.18	3.16	3.58	2.32	3.26	2.22
1942	2.77	3.41	2.14	2.75	3.45	3.88	2.77	3.42	2.30
1943	3.01	3.44	2.06	2.85	3.17	3.80	2.98	3.39	2.22
1944	2.99	3.22	1.81	2.24	2.29	2.74	2.86	3.05	1.90
1945	2.53	2.96	1.60	1.96	2.19	2.60	2.44	2.82	1.69
Average	2.72	3.27	1.94	2.41	2.84	3.32	2.67	3.20	2.06
1946	2.06	2.88	1.49	2.22	2.47	2.86	2.09	2.80	1.63
1947	2.39	3.04	1.57	2.20	2.57	3.03	2.36	2.96	1.69
1948	2.01	2.73	1.45	1.76	2.00	2.40	1.97	2.60	1.54
1949	1.21	2.19	1.13	1.20	1.83	2.11	1.21	2.13	1.22
1950	1.35	2.19	1.06	1.25	1.77	2.09	1.33	2.11	1.14
Average	1.80	2.65	1.36	1.73	2.16	2.54	1.79	2.56	1.47
1951	1.84	2.74	1.28	1.45	2.09	2.41	1.78	2.64	1.37
1952	1.33	2.14	.96	1.58	2.29	2.44	1.37	2.16	1.07
1953	1.34	2.12	.87	1.15	2.04	2.10	1.31	2.11	.95
1954	1.38	2.34	.85	1.48	2.72	2.14	1.40	2.40	.94
1955	1.60	2.28	.78	1.74	2.86	2.07	1.61	2.35	.85
Average	1.51	2.35	.96	1.46	2.32	2.26	1.50	2.34	1.05
1956	1.72	2.43	.79	1.72	2.44	1.74	1.72	2.43	.85

[1] Before 1910 certain States did not maintain records of injuries. The above rates are based exclusively on tonnage and men employed in States for which injury records are available.

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TABLE 90.—***Bituminous-coal mines:*** *Fatalities, by principal injury agencies, 1906–56* [1]

Year	Falls of roof and face [2]	Haulage	Gas or dust explosions	Explosives	Electricity	All other underground	Total underground	Shaft	Underground and shaft	Surface [3]	Grand total
1906	826	192	219	115	52	27	1,431	73	1,504	77	1,581
1907	911	260	911	134	49	99	2,364	59	2,423	111	2,534
1908	829	229	320	109	53	97	1,637	53	1,690	77	1,767
1909	975	240	264	122	52	312	1,965	37	2,002	73	2,075
1910	1,061	295	477	113	76	46	2,068	60	2,128	92	2,220
Average	921	243	438	119	56	116	1,893	56	1,949	86	2,035
1911	1,007	294	331	72	92	44	1,840	31	1,871	86	1,957
1912	943	296	255	70	75	44	1,683	39	1,722	96	1,818
1913	1,007	344	464	63	79	82	2,039	32	2,071	96	2,167
1914	903	309	305	56	86	55	1,714	41	1,755	104	1,859
1915	818	269	270	76	85	35	1,553	30	1,583	100	1,683
Average	936	303	325	67	83	52	1,766	35	1,801	96	1,897
1916	850	330	183	60	81	49	1,553	34	1,587	84	1,671
1917	965	433	319	55	76	60	1,908	44	1,952	162	2,114
1918	1,052	446	103	85	77	76	1,839	41	1,880	149	2,029
1919	878	310	149	57	64	79	1,537	39	1,576	112	1,688
1920	937	342	124	82	70	72	1,627	34	1,661	120	1,781
Average	936	372	176	68	74	67	1,693	38	1,731	126	1,857
1921	782	275	62	74	76	71	1,340	25	1,365	83	1,448
1922	780	286	298	55	71	56	1,546	36	1,582	102	1,684
1923	948	347	330	66	70	64	1,825	31	1,856	97	1,953
1924	846	299	486	46	72	56	1,805	17	1,822	84	1,906
1925	910	310	302	49	80	76	1,727	30	1,757	77	1,834
Average	853	303	296	58	74	65	1,649	27	1,676	89	1,765
1926	994	384	373	46	94	62	1,953	27	1,980	85	2,065
1927	924	309	187	48	94	70	1,632	22	1,654	88	1,742
1928	825	313	347	41	82	54	1,662	13	1,675	54	1,729
1929	922	349	168	45	75	56	1,615	17	1,632	73	1,705
1930	856	285	234	31	63	68	1,537	9	1,546	73	1,619
Average	904	328	262	42	82	62	1,680	17	1,697	75	1,772
1931	624	194	68	15	62	44	1,007	19	1,026	54	1,080
1932	466	146	162	21	42	45	882	13	895	63	958
1933	458	162	27	24	46	45	762	10	772	61	833
1934	539	168	40	21	53	64	885	9	894	64	958
1935	524	198	26	31	43	70	892	13	905	63	968
Average	522	174	65	22	49	54	886	12	898	61	959
1936	624	202	41	31	44	81	1,023	11	1,034	64	1,098
1937	606	244	116	31	52	64	1,113	15	1,128	70	1,198
1938	474	142	84	23	38	53	814	9	823	57	880
1939	500	155	43	15	49	56	818	5	823	44	867
1940	520	192	292	28	30	62	1,124	12	1,136	68	1,204
Average	545	187	115	26	42	63	978	11	989	60	1,049
1941	574	191	89	24	42	65	985	9	994	78	1,072
1942	592	241	148	16	51	89	1,137	6	1,143	102	1,245
1943	592	227	166	27	33	80	1,125	5	1,130	95	1,225
1944	563	211	32	19	26	136	987	28	1,015	109	1,124
1945	453	196	72	23	20	60	824	7	831	94	925
Average	555	213	102	22	34	86	1,012	11	1,023	95	1,118
1946	442	152	27	12	17	44	694	17	711	84	795
1947	456	190	154	23	20	36	879	15	894	91	985
1948	474	148	39	22	19	41	743	18	761	101	862
1949	270	94	3	14	10	25	416	9	425	69	494
1950	313	98	3	10	11	24	459	10	469	81	550
Average	391	137	45	16	15	34	638	14	652	85	737
1951	309	101	153	7	18	24	612	6	618	66	684
1952	240	95	7	5	10	22	379	10	389	60	449
1953	233	74	9	4	12	13	345	4	349	48	397
1954	177	62	17	5	11	15	287	4	291	43	334
1955	199	61	2	10	14	15	301	2	303	57	360
Average	231	79	38	6	13	18	385	5	390	55	445
1956	215	71	5	8	14	28	341	1	342	50	392

[1] Figures for 1906–09 cover only States that maintained complete records of fatal injuries. These represent 98 to 99 percent of the total production of coal in the United States. Figures for 1910 to date represent the entire bituminous-coal industry.

[2] Since 1955, data in major cause tables shown elsewhere in this publication will not necessarily add to total shown here, because they do not include falls of roof and face resulting from bumps or bursts, equipment knocking out supports, etc.

[3] Includes strip mines and for 1955–56, auger mines.

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TABLE 91.—*Pennsylvania anthracite mines: Fatalities, by principal injury agencies, 1906–56*

Year	Falls of roof and face[1]	Haulage	Gas or dust explosions	Explosives	Electricity	All other underground	Total underground	Shaft	Underground and shaft	Surface[2]	Grand total
1906	214	67	46	82	1	27	437	19	456	101	557
1907	294	88	45	87	3	57	574	27	601	107	708
1908	299	90	55	94	1	33	572	24	596	82	678
1909	254	71	31	69	6	49	480	10	490	77	567
1910	253	93	20	82	3	38	489	20	509	92	601
Average	262	82	39	83	3	41	510	20	530	92	622
1911	252	92	34	88	2	126	594	21	615	84	699
1912	243	79	35	77	5	37	476	22	498	103	601
1913	257	85	50	75	1	55	523	30	553	65	618
1914	228	76	44	90	3	45	486	47	533	62	595
1915	261	80	34	79	4	58	516	10	526	60	586
Average	248	83	39	82	3	64	519	26	545	75	620
1916	215	64	43	86	9	57	474	15	489	66	555
1917	265	64	41	55	3	39	467	16	483	99	582
1918	242	66	26	50	11	47	442	11	453	98	551
1919	229	73	42	149	4	49	546	13	559	76	635
1920	197	66	36	49	6	40	394	22	416	75	491
Average	229	67	38	79	6	46	465	15	480	83	563
1921	243	70	64	68	4	50	499	11	510	37	547
1922	128	58	13	38	3	19	259	5	264	36	300
1923	219	73	42	49	5	45	433	15	448	61	509
1924	216	58	50	53	8	45	430	12	442	54	496
1925	170	56	43	53	4	20	346	4	350	50	400
Average	195	63	42	52	5	36	393	10	403	47	450
1926	220	52	49	50	2	39	412	8	420	33	453
1927	225	52	60	62	6	43	448	7	455	34	489
1928	243	52	29	33	6	42	405	12	417	30	447
1929	260	65	27	43	6	31	432	12	444	38	482
1930	243	40	30	47	8	34	402	10	412	32	444
Average	238	52	39	47	6	38	420	10	430	33	463
1931	234	43	20	25	3	23	348	9	357	26	383
1932	161	33	7	15	5	12	233	6	239	10	249
1933	119	32	13	10	7	17	198	10	208	23	231
1934	150	29	12	15	3	25	234	8	242	26	268
1935	140	30	23	19	2	15	229	22	251	23	274
Average	161	33	15	17	4	18	248	11	259	22	281
1936	120	26	16	20	8	26	216	14	230	14	244
1937	120	31	----------	14	4	16	185	11	196	19	215
1938	128	23	20	11	2	17	201	12	213	12	225
1939	121	27	3	17	2	15	185	13	198	13	211
1940	105	36	5	8	7	8	169	8	177	7	184
Average	118	29	9	14	5	16	191	12	203	13	216
1941	100	27	8	12	5	14	166	12	178	16	194
1942	132	37	9	13	6	12	209	5	214	12	226
1943	112	36	15	9	2	18	192	5	197	29	226
1944	82	16	4	16	3	18	139	12	151	23	174
1945	72	19	4	11	1	13	120	9	129	14	143
Average	100	27	8	12	3	15	165	9	174	19	193
1946	104	16	2	8	3	11	144	8	152	21	173
1947	84	14	35	7	4	3	147	6	153	20	173
1948	86	9	2	7	1	6	111	8	119	18	137
1949	54	10	3	3	----------	1	71	12	83	8	91
1950	58	4	5	5	1	1	74	4	78	15	93
Average	77	11	9	6	2	4	109	8	117	16	133
1951	51	15	7	5	1	5	84	5	89	12	101
1952	51	11	4	4	----------	6	76	9	85	14	99
1953	46	2	5	1	2	3	59	1	60	4	64
1954	39	6	1	----------	1	2	49	2	51	11	62
1955	35	6	2	2	----------	3	48	1	49	11	60
Average	44	8	4	2	1	4	63	4	67	10	77
1956	32	5	4	1	2	----------	44	4	48	8	56

[1] Since 1955, data in major cause tables shown elsewhere in this publication will not necessarily add to total shown here, because they do not include falls of roof and face resulting from bumps or bursts, equipment knocking out supports, etc.

[2] Includes strip-mine, washery, dredge, and breaker injuries.

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TABLE 92.—***Bituminous-coal mines:*** *Percentage distribution of fatalities, by injury agencies, 1906–56* [1]

Year	Falls of roof and face	Haulage	Gas or dust explosions	Explosives	Electricity	All other underground	Total, underground	Shaft	Underground and shaft	Surface [2]	Grand total
1906	52.2	12.1	13.9	7.3	3.3	1.7	90.5	4.6	95.1	4.9	100.0
1907	36.0	10.3	36.0	5.2	1.9	3.9	93.3	2.3	95.6	4.4	100.0
1908	46.9	13.0	18.1	6.1	3.0	5.5	92.6	3.0	95.6	4.4	100.0
1909	47.0	11.6	12.7	5.9	2.5	15.0	94.7	1.8	96.5	3.5	100.0
1910	47.8	13.3	21.5	5.1	3.4	2.1	93.2	2.7	95.9	4.1	100.0
Average	45.3	11.9	21.5	5.8	2.8	5.7	93.0	2.8	95.8	4.2	100.0
1911	51.5	15.0	16.9	3.7	4.7	2.2	94.0	1.6	95.6	4.4	100.0
1912	51.9	16.3	14.0	3.9	4.1	2.4	92.6	2.1	94.7	5.3	100.0
1913	46.5	15.9	21.4	2.9	3.6	3.8	94.1	1.5	95.6	4.4	100.0
1914	48.6	16.6	16.4	3.0	4.6	3.0	92.2	2.2	94.4	5.6	100.0
1915	48.6	16.0	16.0	4.5	5.1	2.1	92.3	1.8	94.1	5.9	100.0
Average	49.3	16.0	17.1	3.5	4.4	2.8	93.1	1.8	94.9	5.1	100.0
1916	50.9	19.7	11.0	3.6	4.8	2.9	92.9	2.1	95.0	5.0	100.0
1917	45.7	20.5	15.1	2.6	3.6	2.8	90.3	2.0	92.3	7.7	100.0
1918	51.8	22.0	5.1	4.2	3.8	3.7	90.6	2.1	92.7	7.3	100.0
1919	52.0	18.4	8.8	3.4	3.8	4.7	91.1	2.3	93.4	6.6	100.0
1920	52.6	19.2	7.0	4.6	3.9	4.1	91.4	1.9	93.3	6.7	100.0
Average	50.4	20.0	9.5	3.7	4.0	3.6	91.2	2.0	93.2	6.8	100.0
1921	54.0	19.0	4.3	5.1	5.2	4.9	92.5	1.8	94.3	5.7	100.0
1922	46.3	17.0	17.7	3.3	4.2	3.3	91.8	2.1	93.9	6.1	100.0
1923	48.5	17.8	16.9	3.3	3.6	3.3	93.4	1.6	95.0	5.0	100.0
1924	44.1	15.7	25.5	2.4	3.8	2.9	94.7	.9	95.6	4.4	100.0
1925	49.6	16.9	16.5	2.7	4.4	4.1	94.2	1.6	95.8	4.2	100.0
Average	48.3	17.1	16.8	3.3	4.2	3.7	93.4	1.6	95.0	5.0	100.0
1926	48.1	18.6	18.1	2.2	4.6	3.0	94.6	1.3	95.9	4.1	100.0
1927	53.1	17.7	10.7	2.8	5.4	4.0	93.7	1.2	94.9	5.1	100.0
1928	47.7	18.1	20.1	2.4	4.7	3.1	96.1	.8	96.9	3.1	100.0
1929	54.1	20.5	9.9	2.6	4.4	3.2	94.7	1.0	95.7	4.3	100.0
1930	52.9	17.6	14.4	1.9	3.9	4.2	94.9	.6	95.5	4.5	100.0
Average	51.0	18.5	14.8	2.4	4.6	3.5	94.8	1.0	95.8	4.2	100.0
1931	57.8	18.0	6.3	1.4	5.7	4.0	93.2	1.8	95.0	5.0	100.0
1932	48.7	15.2	16.9	2.2	4.4	4.7	92.1	1.3	93.4	6.6	100.0
1933	55.0	19.4	3.3	2.9	5.5	5.4	91.5	1.2	92.7	7.3	100.0
1934	56.3	17.5	4.2	2.2	5.5	6.7	92.4	.9	93.3	6.7	100.0
1935	54.1	20.5	2.7	3.2	4.4	7.2	92.1	1.4	93.5	6.5	100.0
Average	54.4	18.2	6.8	2.3	5.1	5.6	92.4	1.2	93.6	6.4	100.0
1936	56.8	18.4	3.8	2.8	4.0	7.4	93.2	1.0	94.2	5.8	100.0
1937	50.6	20.4	9.7	2.6	4.3	5.3	92.9	1.3	94.2	5.8	100.0
1938	53.9	16.1	9.6	2.6	4.3	6.0	92.5	1.0	93.5	6.5	100.0
1939	57.7	17.9	4.9	1.7	5.7	6.4	94.3	.6	94.9	5.1	100.0
1940	43.2	15.9	24.3	2.3	2.5	5.2	93.4	1.0	94.4	5.6	100.0
Average	51.9	17.8	11.0	2.5	4.0	6.0	93.2	1.1	94.3	5.7	100.0
1941	53.5	17.8	8.3	2.2	4.0	6.1	91.9	.8	92.7	7.3	100.0
1942	47.5	19.4	11.9	1.3	4.1	7.1	91.3	.5	91.8	8.2	100.0
1943	48.3	18.5	13.6	2.2	2.7	6.5	91.8	.4	92.2	7.8	100.0
1944	50.1	18.8	2.8	1.7	2.3	12.1	87.8	2.5	90.3	9.7	100.0
1945	48.9	21.2	7.8	2.5	2.2	6.5	89.1	.7	89.8	10.2	100.0
Average	49.6	19.1	9.1	2.0	3.0	7.7	90.5	1.0	91.5	8.5	100.0
1946	55.6	19.1	3.4	1.5	2.1	5.6	87.3	2.1	89.4	10.6	100.0
1947	46.3	19.3	15.6	2.3	2.0	3.7	89.2	1.6	90.8	9.2	100.0
1948	54.9	17.2	4.5	2.6	2.2	4.8	86.2	2.1	88.3	11.7	100.0
1949	54.7	19.0	.6	2.8	2.0	5.1	84.2	1.8	86.0	14.0	100.0
1950	56.9	17.8	.6	1.8	2.0	4.4	83.5	1.8	85.3	14.7	100.0
Average	53.1	18.6	6.1	2.2	2.0	4.6	86.6	1.9	88.5	11.5	100.0
1951	45.2	14.8	22.4	1.0	2.6	3.5	89.5	.9	90.4	9.6	100.0
1952	53.4	21.2	1.6	1.1	2.2	4.9	84.4	2.2	86.6	13.4	100.0
1953	58.7	18.6	2.3	1.0	3.0	3.3	86.9	1.0	87.9	12.1	100.0
1954	53.0	18.5	5.1	1.5	3.3	4.5	85.9	1.2	87.1	12.9	100.0
1955	55.2	16.9	.6	2.8	3.9	4.2	83.6	.6	84.2	15.8	100.0
Average	51.9	17.7	8.5	1.4	2.9	4.1	86.5	1.2	87.7	12.3	100.0
1956	54.8	18.1	1.3	2.0	3.6	7.1	86.9	.3	87.2	12.8	100.0

[1] Figures for 1906–9 cover only States that maintained complete records of fatal injuries. These represent 98 to 99 percent of the total production of coal in the United States. Figures for 1910 to date represent the entire bituminous-coal industry.

[2] Includes strip mines and for 1955–56, auger mines.

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TABLE 93.—***Pennsylvania anthracite mines:*** *Percentage distribution of fatalities, by injury agencies, 1906–56*

Year	Falls of roof and face	Haulage	Gas or dust explosions	Explosives	Electricity	All other underground	Total underground	Shaft	Underground and shaft	Surface[1]	Grand total
1906	38.4	12.0	8.3	14.7	0.2	4.9	78.5	3.4	81.9	18.1	100.0
1907	41.5	12.4	6.4	12.3	.4	8.1	81.1	3.8	84.9	15.1	100.0
1908	44.1	13.3	8.1	13.9	.1	4.9	84.4	3.5	87.9	12.1	100.0
1909	44.8	12.5	5.5	12.2	1.1	8.6	84.7	1.7	86.4	13.6	100.0
1910	42.1	15.5	3.3	13.7	.5	6.3	81.4	3.3	84.7	15.3	100.0
Average	42.1	13.2	6.3	13.3	.5	6.6	82.0	3.2	85.2	14.8	100.0
1911	36.1	13.2	4.9	12.6	.2	18.0	85.0	3.0	88.0	12.0	100.0
1912	40.4	13.2	5.8	12.8	.8	6.2	79.2	3.7	82.9	17.1	100.0
1913	41.6	13.8	8.1	12.1	.1	8.9	84.6	4.9	89.5	10.5	100.0
1914	38.3	12.8	7.4	15.1	.5	7.6	81.7	7.9	89.6	10.4	100.0
1915	44.5	13.7	5.8	13.5	.7	9.9	88.1	1.7	89.8	10.2	100.0
Average	40.0	13.4	6.3	13.2	.5	10.3	83.7	4.2	87.9	12.1	100.0
1916	38.7	11.5	7.8	15.5	1.6	10.3	85.4	2.7	88.1	11.9	100.0
1917	45.5	11.0	7.0	9.5	.5	6.7	80.2	2.8	83.0	17.0	100.0
1918	43.9	12.0	4.7	9.1	2.0	8.5	80.2	2.0	82.2	17.8	100.0
1919	36.1	11.5	6.6	23.5	.6	7.7	86.0	2.0	88.0	12.0	100.0
1920	40.1	13.5	7.3	10.0	1.2	8.1	80.2	4.5	84.7	15.3	100.0
Average	40.7	11.9	6.7	14.0	1.1	8.2	82.6	2.7	85.3	14.7	100.0
1921	44.4	12.8	11.7	12.4	.7	9.2	91.2	2.0	93.2	6.8	100.0
1922	42.7	19.3	4.3	12.7	1.0	6.3	86.3	1.7	88.0	12.0	100.0
1923	43.0	14.3	8.3	9.6	1.0	8.9	85.1	2.9	88.0	12.0	100.0
1924	43.5	11.7	10.1	10.7	1.6	9.1	86.7	2.4	89.1	10.9	100.0
1925	42.5	14.0	10.8	13.2	1.0	5.0	86.5	1.0	87.5	12.5	100.0
Average	43.3	14.0	9.3	11.6	1.1	8.0	87.3	2.3	89.6	10.4	100.0
1926	48.6	11.5	10.8	11.0	.4	8.6	90.9	1.8	92.7	7.3	100.0
1927	46.0	10.6	12.3	12.7	1.2	8.8	91.6	1.4	93.0	7.0	100.0
1928	54.4	11.6	6.5	7.4	1.3	9.4	90.6	2.7	93.3	6.7	100.0
1929	53.9	13.5	5.6	8.9	1.2	6.5	89.6	2.5	92.1	7.9	100.0
1930	54.7	9.0	6.8	10.6	1.8	7.6	90.5	2.3	92.8	7.2	100.0
Average	51.4	11.2	8.4	10.2	1.3	8.2	90.7	2.2	92.9	7.1	100.0
1931	61.1	11.2	5.2	6.6	.8	6.0	90.9	2.3	93.2	6.8	100.0
1932	64.7	13.3	2.8	6.0	2.0	4.8	93.6	2.4	96.0	4.0	100.0
1933	51.5	13.9	5.6	4.3	3.0	7.4	85.7	4.3	90.0	10.0	100.0
1934	56.0	10.8	4.5	5.6	1.1	9.3	87.3	3.0	90.3	9.7	100.0
1935	51.1	11.0	8.4	6.9	.7	5.5	83.6	8.0	91.6	8.4	100.0
Average	57.3	11.8	5.3	6.1	1.4	6.4	83.3	3.9	92.2	7.8	100.0
1936	49.2	10.7	6.6	8.2	3.2	10.6	88.5	5.8	94.3	5.7	100.0
1937	55.8	14.4	----------	6.5	1.9	7.4	86.0	5.2	91.2	8.8	100.0
1938	56.9	10.2	8.9	4.9	.9	7.5	89.3	5.4	94.7	5.3	100.0
1939	57.3	12.8	1.4	8.1	1.0	7.1	87.7	6.1	93.8	6.2	100.0
1940	57.1	19.6	2.7	4.3	3.8	4.3	91.8	4.4	96.2	3.8	100.0
Average	54.6	13.4	4.2	6.5	2.3	7.4	88.4	5.6	94.0	6.0	100.0
1941	51.6	13.9	4.1	6.2	2.6	7.2	85.6	6.2	91.8	8.2	100.0
1942	58.4	16.4	4.0	5.8	2.6	5.3	92.5	2.2	94.7	5.3	100.0
1943	49.6	15.9	6.6	4.0	.9	8.0	85.0	2.2	87.2	12.8	100.0
1944	47.1	9.2	2.3	9.2	1.7	10.4	79.9	6.9	86.8	13.2	100.0
1945	50.3	13.3	2.8	7.7	.7	9.1	83.9	6.3	90.2	9.8	100.0
Average	51.8	14.0	4.1	6.2	1.6	7.8	85.5	4.7	90.2	9.8	100.0
1946	60.1	9.2	1.2	4.6	1.7	6.4	83.2	4.7	87.9	12.1	100.0
1947	48.6	8.1	20.2	4.1	2.3	1.7	85.0	3.4	88.4	11.6	100.0
1948	62.8	6.6	1.5	5.1	.7	4.3	81.0	5.9	86.9	13.1	100.0
1949	59.3	11.0	3.3	3.3	----------	1.1	78.0	13.2	91.2	8.8	100.0
1950	62.3	4.3	5.4	5.4	1.1	1.1	79.6	4.3	83.9	16.1	100.0
Average	57.9	8.3	6.8	4.5	1.5	3.0	82.0	6.0	88.0	12.0	100.0
1951	50.4	14.8	6.9	5.0	1.0	5.0	83.1	5.0	88.1	11.9	100.0
1952	51.5	11.1	4.1	4.1	----------	6.0	76.8	9.1	85.9	14.1	100.0
1953	71.9	3.1	7.8	1.6	3.1	4.7	92.2	1.6	93.8	6.2	100.0
1954	62.9	9.6	1.6	----------	1.6	3.3	79.0	3.3	82.3	17.7	100.0
1955	58.4	10.0	3.3	3.3	----------	5.0	80.0	1.7	81.7	18.3	100.0
Average	57.1	10.4	5.2	2.6	1.3	5.2	81.8	5.2	87.0	13.0	100.0
1956	57.2	8.9	7.1	1.8	3.6	----------	78.6	7.1	85.7	14.3	100.0

[1] Includes strip-mine, washery, dredge, and breaker injuries.

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